2020 | THE NATION, SOUTHERN CALIFORNIA AND ORANGE COUNTY

ECONOMIC FORECAST

WOODS CENTER FOR ECONOMIC ANALYSIS AND FORECASTING

TABLE OF CONTENTS

DEAL OR NO DEAL? THE ART OF BUSINESS IN AN AGING EXPANSION

Economic Outlook and Forecasts:
The Nation, Southern California and Orange County

Anil Puri, Ph.D., and Mira Farka, Ph.D.

U.S. ECONOMIC OUTLOOK AND FORECASTS

Overview 3
Does It Feel Like a Recession Is Close? A Brief Historical Review 7
Recession Watch: What to Worry About When You Worry 14
Still Standing: Easing into Slower Growth 17
Dark Clouds: Outlook Hinges Largely on Policy (and Political) Whims 19

ORANGE COUNTY AND SOUTHERN CALIFORNIA

The Labor Market: Overview 22
Business Expectations 25
Housing and Construction 27
Forecasts 29

TABLES

National 30
Orange County........ 31
Southern California........ 32
Los Angeles County 33
Riverside/San Bernardino Counties 34
Ventura County 35
Imperial County........ 36
Construction and Real Estate........ 37

DEAL OR NO DEAL? THE ART OF BUSINESS IN AN AGING EXPANSION

TRADE WITH CHINA THROUGH SOUTHERN CALIFORNIA PORTS 38
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ECONOMIC OUTLOOK AND FORECASTS:

The Nation, Southern California and Orange County

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THE ART OF BUSINESS IN AN AGING EXPANSION

“I’ve heard there’s going to be a recession. I’ve decided not to participate”
– Walt Disney

Overview

Seinfeld, the iconic, impressive tour-de-force TV sitcom of the ’90s, has been long dubbed “the show about nothing.” It has no clear plot; it eschews sentimentality and its complex and flawed characters seem to idle their days in an old diner on the Upper West Side, poring over the minutia of social interactions and debating the most mundane facts of life. Thirty years later, the show is as far-reaching as ever, not surprisingly because a show that is meant to be about nothing is really about everything. We are magnificently regaled with a wide array of characters from “high-talkers” to “low-talkers” and “close-talkers” and an even wider span of bizarre things like “double-dipping,” “puffy shirts,” “subpar babkas” and “coffee table books about coffee tables.” The show superbly showcases the insecurities, inadequacies, neurotic hang-ups, petty squabbles and self-involvement of the main characters displayed in the drudgery of day-to-day life with all its annoyances and aggravations. It is simply brilliant.

To long-term fans of the show (like ourselves), the parallels between *Seinfeld* and today’s economy are hard to miss. Recession fears reached a fever pitch in mid-August, when an escalation of the trade war between U.S. and China, downbeat data from Europe and China, and an inversion of additional portions of the yield curve simultaneously combined for a dour outlook (Figure 1). Anxiety has persisted: There’s now fear that the fear will spark a recession. Much like *Seinfeld* (the show about nothing), there does not appear to be a single underlying recession culprit out there: just the aggregation of many irritants that together have managed to paint a pervasive feeling of hopeless misery that a “perfect storm” is brewing. Rather than a single executioner, the death of this expansion is feared to eventually come from a thousand cuts.

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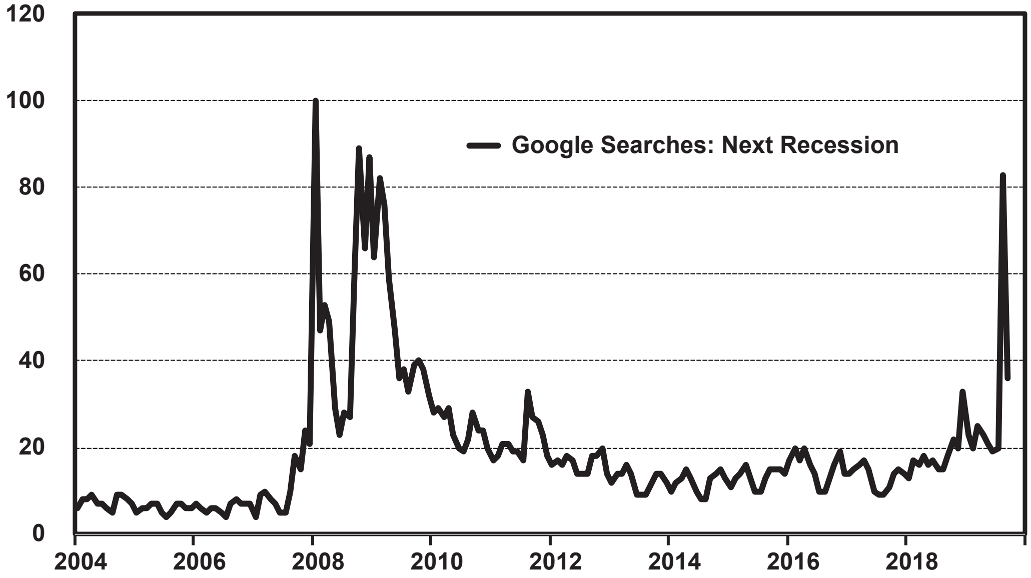
FIGURE 1
On Edge: Recession Fears Spike
(Google searches for the phrase "next recession," index)



There is no denying that the chances of a recession are uncomfortably high, the highest since the end of the Great Recession. As it ages, the expansion becomes more vulnerable to all sorts of shocks – much like the aging process in humans, while a younger physique may be able to sustain numerous body-blows without succumbing (as this expansion has), doing so at an older age becomes inevitably harder.

This, however, would be unprecedented. All previous post-war recessions have had a catalyst, a main driver that delivered the fatal blow into the abyss. Going back to the early 1950s, the primary culprits fall in either one of the four categories: a) oil price shocks (1973 and 1980), b) fiscal tightening (1953 as the Korean War wound up), c) overheating, which led to an overtightening by the Fed (1957, 1960, 1969, 1973, 1980 and 1981), or d) financial imbalances (1990, 2001 and 2007). As we discuss in more detail below, none of these factors appear to be overly threatening as of now.

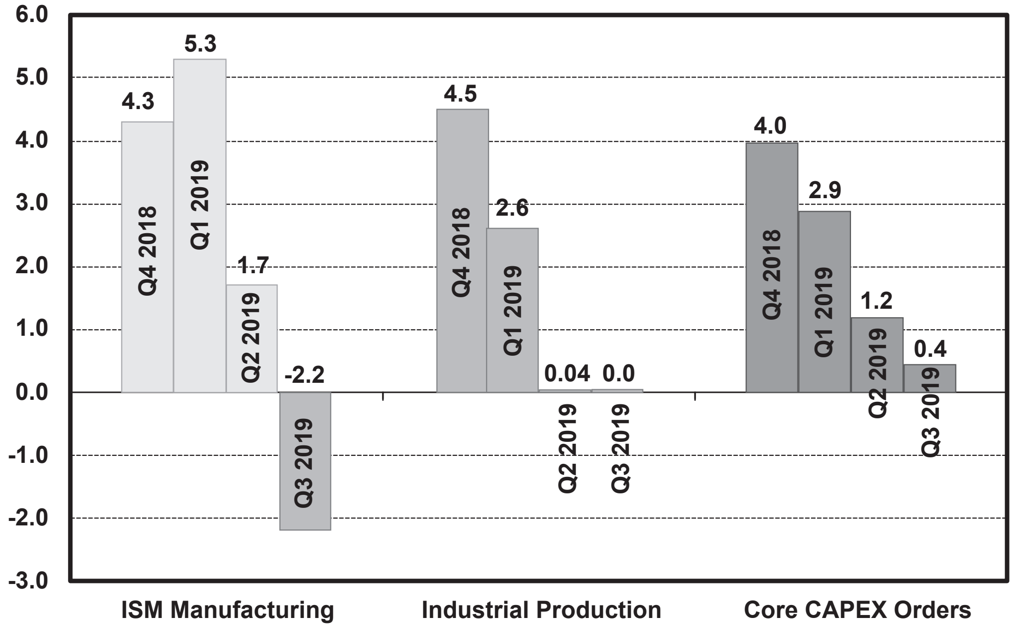
Having said that, there is no denying that the chances of a recession are uncomfortably high, the highest since the end of the Great Recession. As it ages, the expansion becomes more vulnerable to all sorts of shocks – much like the aging process in humans, while a younger physique may be able to sustain numerous body-blows without succumbing (as this expansion has), doing so at an older age becomes inevitably harder. Hence the endless handwringing and fretting over an impending recession.

It is perhaps instructive to begin our analysis with an “airing of grievances,” the cornerstone of the Festivus celebration in *Seinfeld* (Festivus is a non-religious, non-commercial alternative to Christmas). And there are plenty of grievances to air. The world economy has been on a downswing since 2018 with the slump taking a firmer hold this year: Second quarter Eurozone growth came at 0.2%, half of the pace in the first quarter. Germany, the single market’s largest economy, seems to be teetering on the brink of a recession: The second quarter real GDP print was negative, while in September its PMI Manufacturing index collapsed to a seven-year low (and is officially in recession territory). More ominously, the rot seems to have spread to the service sector, with the services PMI slumping dangerously close to a recession threshold. The Italian economy continues to struggle. The UK is mired in the never-ending Brexit saga, which has dented business confidence and sapped consumer sentiment: Second quarter growth slumped by -0.2% and estimates for the third quarter are range-bound around stall speed (-0.2% to 0.2%). The biggest concern is China: Its second quarter GDP growth, at 6.2%, was the slowest since 1992. In August, its industrial production grew by 4.8% year-over-year, the weakest in 17 years. The future in much of the world seems so bleak that global debt with negative yields has ballooned to $17 trillion (28% of the total debt market).

While things are not as dire in the U.S., it is getting harder to muster significant optimism about the economy. Growth has slowed from 3.1% in the first quarter to 2% in the second. Business fixed investments collapsed by -6.3% in the second quarter, after growing by 6.2% in the first. Pockets of the U.S. economy (where trouble usually first rears its head) may already be flirting with recession. Manufacturing production has declined by a total of 1.5% since last December. The latest reading from the Institute of Supply Management (ISM) was the worst since June 2009. Manufacturing new orders fell by an annualized pace of 4.4% in August, and while nondefense core CAPEX (capital goods orders excluding aircraft) have held up marginally better, they are currently running at stall speed (Figure 2). The agriculture, transportation and distribution sectors have also wobbled appreciably as a slowing global economy, trade wars and policy uncertainty continue to hammer away at business confidence. To make matters worse, the labor market turned out to be not as strong as originally believed. As part of its annual benchmark revision, the Bureau of Labor Statistics trimmed its estimated job growth from March 2018 to March 2019 by 501,000. Though final estimates are going to be released in February 2020, the revision implies that the pace of job formation in 2018 was roughly around 185,000 jobs per month, rather than the initially reported blockbuster 223,000.

While things are not as dire in the U.S. as around the world, it is getting harder to muster significant optimism about the economy.

FIGURE 2
That Sinking Feeling: The Production Side Is Struggling
(ISM manufacturing, industrial production, and CAPEX orders, y-o-y percent change)



Things took a turn for the worse this summer. Much like the “Summer of George” in *Seinfeld* (where George was supposed to enjoy a blissful summer of rest but ends up grievously injured), the U.S. expansion had barely celebrated its 10th birthday when an escalation of the trade war and a slumping global economy combined for a souring of sentiment, which further stoked recession fears. On Aug. 1, the Trump administration announced that the U.S. would impose a 10% tariff on an additional $300 billion worth of imports from China, starting in September. Unlike previous rounds of tariffs, this last announcement covers a large swath of consumption goods from footwear to toys to clothing. A few days later, the Chinese currency weakened to below ¥7 to the dollar, a symbolic and psychological threshold that has not been breached since 2008. This prompted the U.S. Treasury to label China “a currency manipulator,” a charge it has not leveled against any country in more than 25 years. In turn, China retaliated by saying it would levy tariffs on the remaining $75 billion in U.S. imports and, more significantly, raise the average tariff on U.S. autos from 12.6% to 42.6%.

Our baseline scenario is that, while flirting dangerously close to recession over the next 12-18 months, the U.S. economy will manage to escape it, but just barely.

Trade war is not the only factor darkening the outlook: Other idiosyncratic events seem to have conspired to further send shivers down the spine. The repo market froze up in mid-September, spiking the repo rate to 8% and sending the federal funds rate outside the targeted range of 2.00-2.25%. Though most of this is due to technical reasons and an unfortunate confluence of events, the liquidity scare dug up darker memories of the 2007 crisis. A drone attack at the heart of Saudi Arabia's oil infrastructure knocked off the production of 5.7 million barrels per day, sending oil futures up by as much as 15%. The Brexit battle has also heated up as the new Prime Minister Johnson vows to adhere to the Oct. 31 deadline "with or without a deal."

It is unquestionable then that the business cycle is currently at a critical juncture. Our baseline scenario is that, while flirting dangerously close to recession over the next 12-18 months, the U.S. economy will manage to escape it, but just barely. Indeed, this is perhaps the hardest call we've had to make since the end of the Great Recession, and it may easily go awry not in the least because it hinges deeply on policy and (more worryingly) on political whims, which we are neither well-equipped nor sufficiently deluded to begin to parse out with any suitable degree of confidence.

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As the discussion above lays out, the main threats to the outlook are supply-side shocks profoundly wedged to political processes: trade wars, Brexit and geopolitical/political risks (oil supply shocks, Iran, impeachment proceedings). Our hope (and main baseline assumption) is that opportunistic self-preservation instincts on the part of the political class would prevail in dictating if not optimal outcomes, at least solutions that assuage somewhat the current pains. No one has forgotten that 2020 is an election year in the U.S., and election outcomes depend greatly on the strength of the economy leading up to elections. But let's also remember that 2021 marks the 100th anniversary of the founding of the Chinese Communist Party (CPP) and China has set concrete goals, such as the doubling of real GDP and per-capita income from their 2010 base (also, October 2019 marked the 70th anniversary of China's communist regime). It stands to reason that it would be in the benefit of both the U.S. and China to declare a truce in the trade war and agree to a deal even if it is limited in scope with the aim of hammering out more details later. Indeed, as this report is going to print, a limited agreement on a limited deal seems to be in place. Likewise, a hard Brexit is likely to inflict considerable harm to both the U.K. and Eurozone at a time when both are vulnerable, and while the political process is immensely thornier here, a deal seems to be in the making, as of this writing.

Avoiding a headlong plunge into a global recession is also highly dependent on central banks' policies. And here, there are reasons to be more optimistic. The most poignant move is the dramatic shift in Fed policy, which has swung from a position of excessive hawkishness (three planned hikes in 2019) to delivering two actual rate cuts, the first since 2008. The U-turn was billed as "insurance" against a low-inflation environment, ratcheting trade tensions and a slumping global economy. A number of other central banks have followed suit with the European Central Bank not only cutting rates but also resuming its asset purchase program. Given that risks are on the upside, we anticipate that further rate cuts are likely necessary over the next few quarters. The survival of the expansion would depend largely on the ability of the Fed to deliver the appropriate policy response at the appropriate time.

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Recent developments have also allayed somewhat recession fears. Both the U.S. and China appear to have backed away from the brink of trade war, agreeing to tackle the issues in two phases, with broad agreement on the first phase (which, arguably, appears to be the easiest). Lower mortgage rates seem to have breathed new life in a torpid housing sector: New home sales jumped 7.1% in August and are running 6.4% higher than last year. Existing home sales posted a back-to-back increase for the first time since 2017. Housing construction also seems to have picked up: Starts also rose by a jaw-dropping 12.3% – the strongest pace since 2007. Consumer spending surged by a torrid 4.6% in the second quarter – the highest pace in more than four years – and though third quarter estimates seem to indicate a pullback (largely stemming from the drumbeat of negative news blanketing the airwaves), spending is still holding up relatively well. Overall, consumer balance sheets appear to be in a pristine shape: Personal income grew by a healthy 0.4% in August, the savings rate rebounded to a robust 8.1%, and debt burdens are the lowest in more than three decades.

Despite these positive developments, we expect growth to slow materially over the forecast horizon. Headwinds from the trade war, sluggish global growth, Brexit concerns, geopolitical risks, fading fiscal stimulus and the lagged effects of the most recent monetary tightening will continue to weigh on the outlook. Businesses are on edge; financial markets are anxious, and consumers are turning more cautious. This is not a recipe for faster growth. Though we expect the economy to slog through these risk factors without sliding into a recession, as mentioned above, a lot hinges on the policy response and political goodwill. In the words of *Seinfeld*: “Breaking up is like knocking over a Coke machine. You can't do it in one push. You gotta rock it back and forth a few times, and then it goes over.” Let’s hope this expansion has a lot more rocking back-and-forth to do before it eventually topples over.

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Does It Feel Like a Recession Is Close? A Brief Historical Review

“Tuesday has no feel. Monday has a feel. Friday has a feel. Sunday has a feel …”
– Newman, *Seinfeld*

It’s pointless to argue when the next recession will occur, unless we first discuss the why. Historically, business expansions have come to an end because of significant vulnerabilities in the private sector, which were inevitably exposed by some type of shock. Going back to the 1950s, there are generally four main catalysts that have preceded the 10 previous recessions (starting in 1953) (Table 1). Broadly speaking, they can be categorized as follows: a) fiscal tightening (1953, after the end of the Korean War), b) oil price shocks (1973 and 1980), c) overheating, which led to an overtightening by the Fed (1957, 1960, 1969, 1973, 1980 and 1981), or d) financial imbalances (1990, 2001 and 2007).

TABLE 1
Main Recession Factors

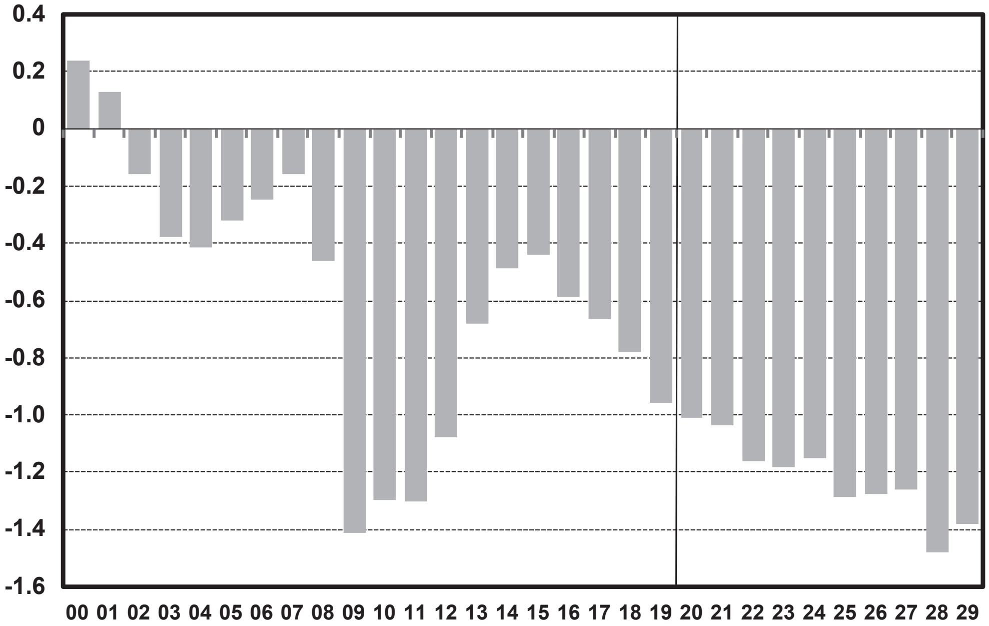
	FISCAL	OIL SHOCKS	OVERHEATING/ OVERTIGHTENING	FINANCIAL IMBALANCES
1953	■			
1957			■	
1960			■	
1969			■	
1973		■	■	
1980		■	■	
1981			■	
1990				■
2001				■
2007				■

The first cause – fiscal tightening – has generally meant significant post-war demobilization of resources of the scale of World War II (which preceded the recession in 1945) or the Korean War (1953). Obviously, this is not the case now. However, new risks may emerge on the political front as dysfunction, polarization and disagreements, which have plagued policymaking in Washington since its inception, have arguably escalated to new heights over the past few years. In September, the U.S. House of Representatives formally begun an impeachment inquiry into President Trump. It is hard to see how the relationship between the executive branch and the House can improve against this backdrop.

Political disfunction threatens a number of legislative developments including the outlook for the budget and the U.S. – Mexico – Canada Agreement (USMCA)

This threatens a number of legislative developments including the outlook for the budget and the U.S. – Mexico – Canada Agreement (USMCA). Though Congress agreed in July to increase the discretionary budget caps by a total of $320 billion over FY 2020 and FY 2021, appropriation bills have yet to be passed. Longer term, policymakers will need to contend with the escalation of federal debt: The projected budget deficit for the upcoming decade exceeds $1 trillion per year (Figure 3). Things may take a turn for the worse quickly should the next recession hit, thus possibly requiring bold and coordinated action not only on the part of monetary policy but also on the fiscal front. In addition, while the deterioration of the fiscal outlook is not an imminent crisis, it will become one sooner or later.

FIGURE 3
Red Ink: Budget Defcits Are Projected to Grow Over $1 Trillion per Year
(federal budget deficit, trillions of dollars)



Political dysfunction is precisely the wrong prescription for the challenges we face, but we hold little faith that the current political landscape will change for the better any time soon.

Political dysfunction is precisely the wrong prescription for the challenges we face, but we hold little faith that the current political landscape will change for the better any time soon. We take some solace in the fact that the economy had trudged through this dysfunction for the better part of the past decade, having almost become immune to it, so we don't expect fiscal/political risks to be the main catalyst of the next recession (though it won't help matters).

Oil shocks appear to be less threatening to the outlook today, not in the least because the U.S. economy had undergone a massive structural shift leaving it less sensitive (and less vulnerable) to oil price fluctuations and oil supply disruptions. The demand (and energy intensity) for oil has declined steadily over the past four decades (Figure 4). Moreover, a surge in shale oil production in recent years has propelled the U.S. to the top spot of global oil production, accounting for 18% of the world output compared to Saudi Arabia's 12% and Russia's 11%.

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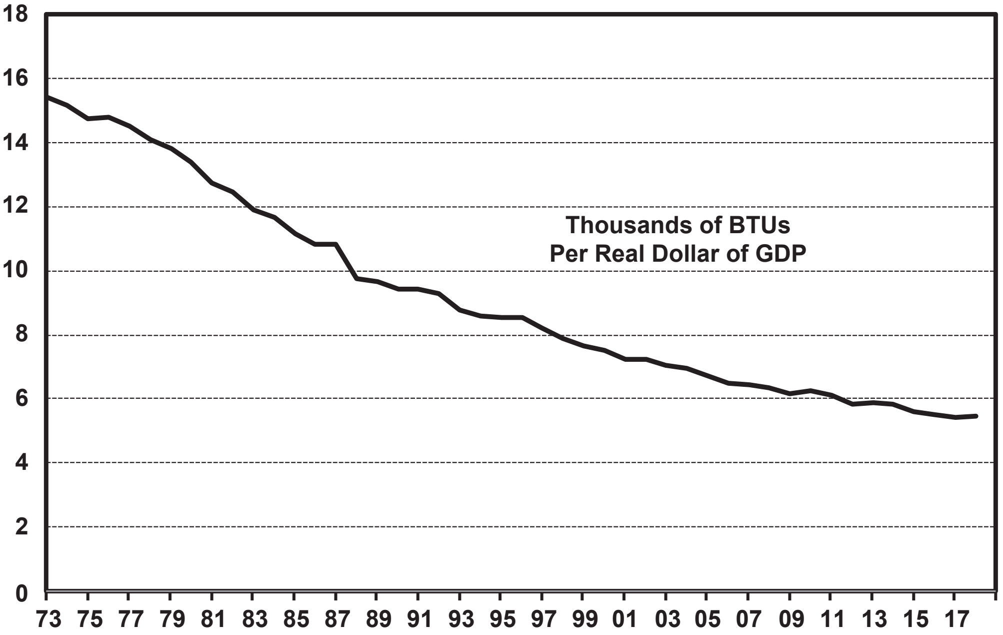
FIGURE 4
Structurally Different: U.S. Economy Less Dependent On Oil (thousands of BTUs per real dollar of GDP, ratio)



The mid-September attacks on Saudi Arabia's plants of Khurais and Abqaiq brought back terror-filled nightmares of global oil supply disruption. The attacks affected the production of 5.7 million barrels of crude oil, the equivalent of roughly 60% of Saudi Arabia's output and 6% of the world's oil production. The good news is that, two weeks later (as of this writing), roughly 75% of the production is back up, with the remainder expected to be fully restored by mid October. On the downside, this has escalated conflict in the region, facing off a potential military showdown between Saudi Arabia and Iran (who is accused of carrying out the strike) and, potentially, the U.S. Though the administration has shown admirable restraint when it comes to the use of military force, there is no denying that geopolitical risks are high and tensions are brewing. Nonetheless, as we argued above, it is worth remembering that potential energy supply shocks today pack less of a punch than they did four decades ago, which means that these developments are unlikely to be the death knell of this expansion.

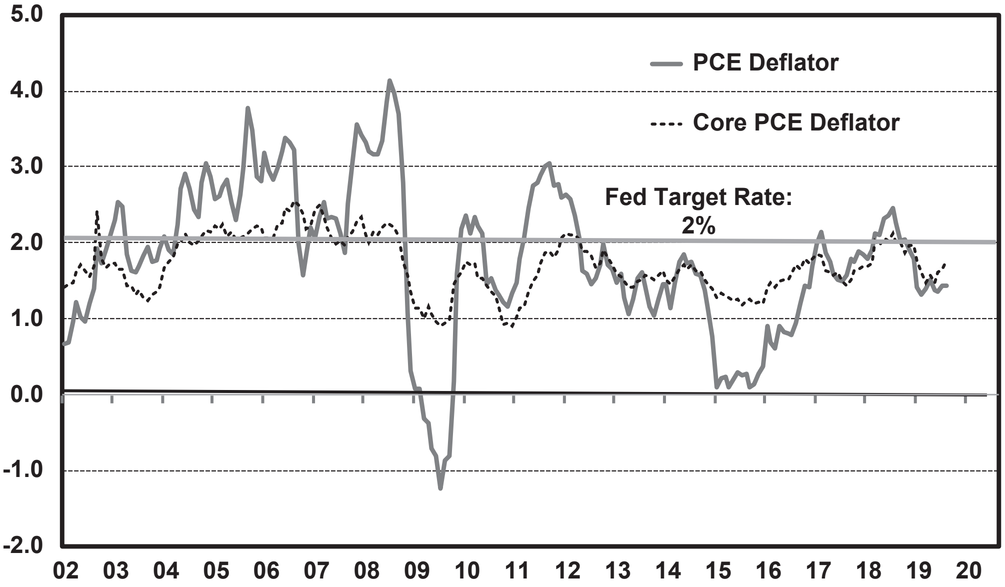
Though the administration has shown admirable restraint when it comes to the use of military force, there is no denying that geopolitical risks are high and tensions are brewing.

The third catalyst – overheating followed by excessive tightening by the Fed – appeared a lot more plausible last year, but the argument has lost some steam now that the economy, instead of ramping up, is hitting a soft patch. The five recessions that were caused by overheating/overtightening follow a similar script: the labor market heats up, unemployment declines below its NAIRU rate (the full employment rate), the economy bumps against resource constraints, wages pick up, inflation escalates and the Fed is forced to respond aggressively by raising rates thus bringing about the end of the expansion.

The third catalyst – overheating followed by excessive tightening by the Fed – appeared a lot more plausible last year, but the argument has lost some steam now that the economy, instead of ramping up, is hitting a soft patch.

Things have not worked out quite that way this time around. The Phillips curve, a geeky measure that links tighter labor markets with a build-up in inflationary pressures, has not behaved; indeed, it appears to have been broken down entirely. Decades-low unemployment rates have failed to produce any meaningful tick-up in inflation. In fact, one of the most enduring mysteries of this expansion, both domestically and worldwide, has been a pervasive lack of inflation: Whenever inflationary forces start to build up, they dissipate just as quickly. Over the period from 2013-2019, the personal consumption expenditure (PCE) deflator and core PCE deflator, the Fed's two preferred measures of inflation, have averaged 1.3% and 1.6%, respectively, woefully below the 2% target preferred by the Fed (Figure 5). The Consumer Price Index (CPI) has not fared much better, having posted an average annual rate of 1.5% during this period.

FIGURE 5
An Enduring Mystery: The Missing Inflation
(PCE deflator and core PCE deflator, y-o-y percent change)



The absence of inflation has been somewhat baffling (and admittedly bruising) for the Fed. It raised interest rates nine times since 2015 on the belief that a stronger economy (particularly a robust labor market) would put pressure on prices.

The absence of inflation has been somewhat baffling (and admittedly bruising) for the Fed. It raised interest rates nine times since 2015 on the belief that a stronger economy (particularly a robust labor market) would put pressure on prices. Tight labor markets build up inflationary pressures through higher wages: As employers compete for increasingly scarce resources (labor), wage growth ramps up, ultimately pushing up prices. But wage growth has been strangely quiescent during this cycle. In 2010, when unemployment was as high as 9.6%, wages grew at an annualized pace of 3.3%. Currently, the unemployment rate sits at a five-decade low of 3.7% and wage growth is still running at 3.3%.

Though a full understanding of inflation dynamics is beyond the scope of this report, there are a few reasons that explain, at least partially, its abnormal behavior during this cycle. First, the labor market may not be as robust as originally thought: In a sobering move, the BLS revised away 500,000 jobs in the period from March 2018 to March 2019. Though benchmark revisions occur on an annual basis, this was the largest revision since 2009 (when 900,000 jobs were revised away). Moreover, though the unemployment rate is low, not all slack appears to have been mopped up. The labor force participation rate for prime-age workers remains around 1.8 percentage points below pre-crisis levels. This translates to around 2.5 million sidelined workers, suggesting that the capacity of labor force expansion may have not been fully exhausted, at least not yet.

Other dynamics may also have put a lid on wage growth. A structurally older workforce focused more on job security may be less inclined to demand higher wages. Globalization and automation have made it harder for workers to push for higher pay. Global competition may also have reduced firms' pricing power, which means that firms have a harder time passing on to consumers increases in costs and wages. E-commerce and crowd-sourced technology forums (such as Amazon, Google and Yelp) have eliminated vast price disparities in local markets and allowed for instantaneous price shopping, thus making it easier for consumers to avoid paying higher prices.

The central message of all this is that, unlike previous business cycles, the demise of this expansion is unlikely to come from overheating/overtightening. If anything, corners of the economy are cooling down rather than heating up, and the imminent concern at the moment is whether the slowdown will spread to the core: the service sector, labor markets and consumers. The Fed has reversed course and lowered interest rates twice since July. Our view is that more rate cuts are in the pipeline.

The central message is that, unlike previous business cycles, the demise of this expansion is unlikely to come (as of now) from overheating/ overtightening.

The fourth factor, financial exuberance – the executioner of the last three expansions – though building up in some corners of the economy, does not appear out of hand, at least not at the moment. After an entire decade of deleveraging, households and bank balance sheets are in terrific shape (Figure 6). Household debt service and financial obligations are at the lowest levels in over four decades; homeownership rates have corrected back to their historical average (one could safely argue they are a bit below average levels), and spending on business fixed investments and consumer durables – a good barometer of excessive spending – is still below its historical average. Troubles in the repo market aside, the banking sector is now stronger by practically every measure compared to pre-2007 as regulatory oversight and post-crisis risk adjustments have materially lowered systemic risk.

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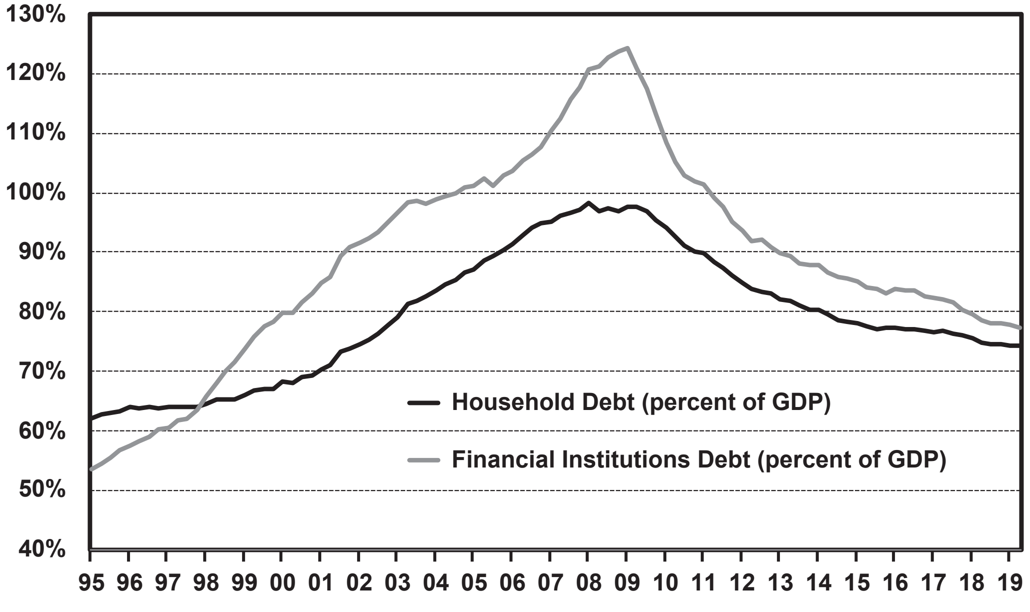
FIGURE 6
Lighter And Healthier: Consumers and Banks Have Deleveraged (household and banking debt, percent of GDP)



Consumers, in particular, have shown admirable restraint during this expansion. Though total household debt rose for a 20th consecutive quarter in Q2 2019 to $13.86 trillion ($1.2 trillion higher than Q3 2018), it has collapsed (as percent of GDP) from an eye-popping 98% (in the first quarter of 2008) to a current 74%, a level similar to the late 1990s and early 2000s. The debt composition has also shifted: Mortgages now make up only 67% of total debt, down from the 74% registered at the height of the housing boom. Mortgage delinquencies have fallen to their lowest levels since data collection began (in 2003), and mortgage quality loans have vastly improved: Roughly 60% of new mortgage originations are made to buyers with pristine credit scores, compared to only 24% in the run-up to the housing crisis (2004-2005).

While both subprime auto loans and student debt are certainly corrosive to growth, they do not appear to be an existential threat to the expansion at the moment.

Other consumer debt, though rising, does not appear to be unmanageable. Credit card debt, though reaching historical highs, makes up only around 6.2% of total debt, down from around the 9% level seen during 2003-2004. Auto loans and student loans combine for a hefty 20% of consumer debt, but even here things appear to be a bit more encouraging. Subprime auto loans have grown at a much more tepid pace since 2016, while delinquency rates for student debt have stabilized around 10.8%, below the 11%+ rate observed just a few years ago. While both subprime auto loans and student debt are certainly corrosive to growth, they do not appear to be an existential threat to the expansion at the moment.

Moreover, the lingering effect of the financial crisis seems to have turned U.S. consumers into thriftier individuals: The savings rate was revised upward to 8.2% this year from 7.7% in 2018. It is the highest estimate since 2012, when income surged as companies pulled forward dividends and payments in order to head off an upcoming tax increase. While the squirreling away of funds may not bode well for the economy in the near term, more prudence on the part of the consumers is not necessarily undesirable at this stage of the business cycle when growth is slowing and risks are rising.

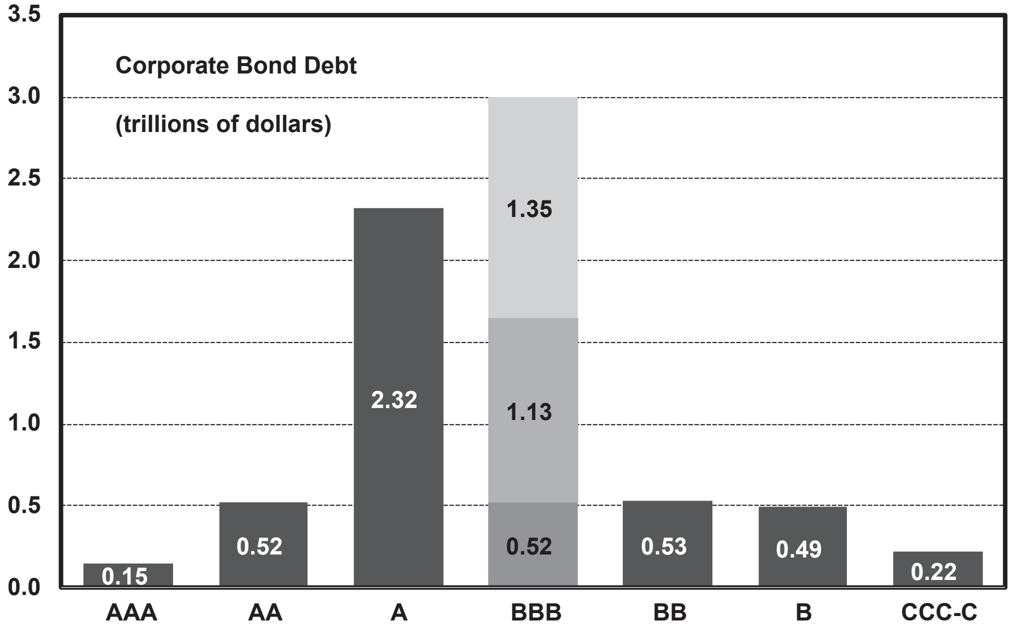
There is no denying that there are pockets of the economy where debt is becoming entrenched and vulnerabilities are rising.

Corporate leverage has skyrocketed, and while this may not be that alarming when earnings rise in tandem, things can turn sour fast when earnings struggle (as is the case this year).

Having said all that, as we have argued in the past, there is no denying that there are pockets of the economy where debt is becoming entrenched and vulnerabilities are rising. Three areas of concern stand out. First, corporate leverage has skyrocketed, and while this may not be that alarming when earnings rise in tandem, things can turn sour fast when earnings struggle (as is the case this year). At the end of 2018, nonfinancial corporations had net debt equivalent to 1.7 times their earnings, a significant increase over the 1.2 ratio observed in 2010. Overall corporate borrowing has soared above $6 trillion, and total nonfinancial debt stands above $15 trillion, 74% of GDP, up from 66% in 2007.

More concerning is the quality of the debt: Leveraged loans (which involve highly indebted companies with weak credit profiles) have ballooned from a mere $20 billion around 20 years ago to a current $1.4 trillion, while the amount of junk bonds is hovering around $1.2 trillion (Figure 7). Combined, the amount of at-risk corporate debt is around $2.6 trillion, roughly the same as the subprime mortgage debt that sunk the economy a decade ago. And while the economy is roughly a third bigger now than back then and the corporate sector has vastly more assets to deploy than the U.S. consumer did in 2007, the deterioration of corporate health is worrisome especially in the face of a darkened outlook, reduced corporate profits and a challenging earnings environment.

FIGURE 7
Trouble Spots: The Quality of Corporate Bond Debt Has Deteriorated (corporate bond debt, by category, trillions of dollars)



The stock market also appears to be a bit overstretched, bordering on frothy. Though the start of the fourth quarter has been quite shaky, the S&P500 rose by a blistering 19% in the first three quarters of the year, the best performance since 1997. This is somewhat baffling given that the outlook (both domestically and abroad) has taken a turn for the worse and it was likely spurred by easier monetary policy. Valuation seems to be stretched to the upside: Based on a number of metrics, the market appears to be somewhere in the top 80%-95% of the valuation range (depending on the measure). It bears noting, however, that a low inflation/low interest rate environment is normally associated with higher valuations, so some upside is expected. Also, a wobbly start of the fourth quarter has taken some froth off: The S&P500 index is currently around 3.8% below its July peaks. Nonetheless, high valuations and a precarious business cycle bear close monitoring particularly in times of heightened anxiety.

The stock market also appears to be a bit overstretched, bordering on frothy.

The third area where shadows are beginning to lurk is the “shadow banking” sector – a catch-all (and much resented) term applied to the new power structure in the financial world, which is far less regulated than traditional banks. Since the financial crisis, the total assets of these nonbank entities have surged 75%, to around $52 trillion worldwide. The U.S. slice is around 30% – or $15 trillion. Only 25% of leveraged loans reside in the traditional banking system with the “shadow banks” accounting for the rest. Since these institutions operate in the periphery of the regulatory reach, their risks from these institutions are scantily tested and poorly understood. And while the rise of non-banks may not pose a systemic risk at the present, greater oversight may be warranted to thwart off darker scenarios from developing.

The third area where shadows are beginning to lurk is the “shadow banking” sector – a catch-all (and much resented) term applied to the new power structure in the financial world, which is far less regulated than traditional banks.

Recession Watch: What to Worry About When You Worry

"What am I scared of? I'm scared of the same thing that you are, everything"
– George Costanza, *Seinfeld*

It is not hard to imagine horror-filled scenarios where things can get a lot worse very quickly. By some metrics, the world economy is hanging by a thread with the U.S. economy not too far behind.

It is not hard to imagine horror-filled scenarios where things can get a lot worse very quickly. By some metrics, the world economy is hanging by a thread with the U.S. economy not too far behind. Data from the factory and manufacturing sector appear to be simply dreadful: In September, the ISM manufacturing index sank to its lowest level since June 2009, when the economy was just beginning to emerge from the Great Recession. Every subcomponent of the index (save for supplier delivery times) is now below the threshold of 50, which separates expansion from contraction. More worryingly, weakness seems to have engulfed ISM the nonmanufacturing survey, which slumped 3.8 points to 52.6. Though the index continues to remain in expansion territory, the details paint a less cheery picture with a broad swath of sub-indices – from business activity, to new orders, employment and inventories – taking a meaningful step back from recent trends.

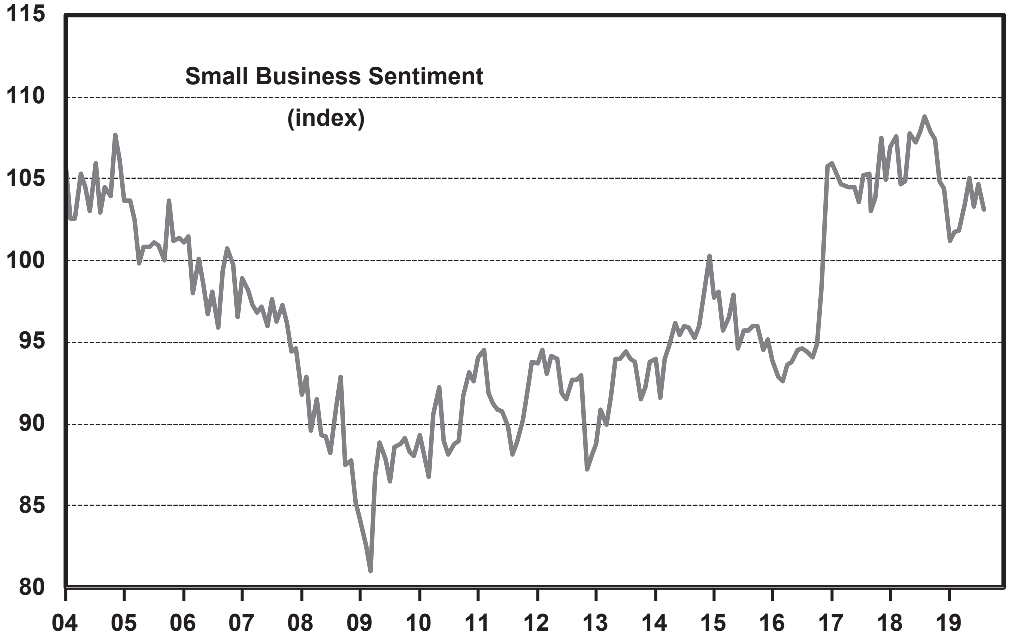
Other cyclical indicators are also flashing warning signs: Real residential construction has fallen for six straight quarters; investments in equipment have stalled for the first half of the year, and investments in structures collapsed by 11% in the second quarter. After a blockbuster 2018, corporate earnings have posted two back-to-back negative quarters, and estimates for the third quarter point to another (even steeper) decline. More ominously, the spread between the 10-year yield and the three-month Treasury rate – a harbinger of every U.S. recession in the postwar era, has remained in negative territory since late May. At the end of August, another portion of the yield curve (the spread between the 10-year and two-year note) also inverted briefly. Not surprisingly, business sentiment, as measured by the Duke University CFO Survey for large corporations, collapsed to a three year-low in September, with the vast majority of business executives expecting a recession to hit by the end of 2020.

While the U.S. economy is unquestionably at a critical point in the business cycle where the probability of a recession is the highest in the decade-long expansion, we expect it will manage to slog through, settling in a slower growth path over the next few quarters rather than plunging headlong into a recession.

While the U.S. economy is unquestionably at a critical point in the business cycle where the probability of a recession is the highest in the decade-long expansion, we expect it will manage to slog through, settling in a slower growth path over the next few quarters rather than plunging headlong into a recession. First, the troubled spots of the economy – manufacturing, agriculture, and potentially transportation and distribution industries (which move in tandem with the production side) – combine for a relatively small portion of GDP, roughly one fifth. Manufacturing alone makes up only about 12% of GDP and 9% of employment rolls. Should it skid any further (as it did back in 2016 when China wobbled and energy prices plunged), it will not, by itself, drag the economy into a recession. Likewise, cyclical components, such as residential investments and investment in structures no longer pack the punch they once did: The share of residential investments has shrunk to 3% of GDP from a historical range of 5-6% while investment in structures make up only 2.7% of GDP (down from a historical average of 5%).

Moreover, an argument can be made that there is some disconnect between hard data and sentiment, especially on the factory and production side. Though the latest ISM manufacturing reading was the worst in over a decade, hard data appear a bit more optimistic. The latest data on the industrial sector shows that manufacturing, while struggling, is not in free fall. More broadly, while business sentiment has soured, the latest employment report showed that they are not laying off workers or cutting hours aggressively. In addition, though business sentiment for large corporations has been sour for a while, small business sentiment, though subdued compared to a year ago, has managed to hang tight (Figure 8).

FIGURE 8
Small Business Sentiment, Though Moderating, Is Hanging Tight
(National Federation of Independent Businesses, index level)



In order to track the economy's transition through its cycle phases, we have developed a Recession Watch dashboard, which monitors a number of leading indicators and their performance around inflection points in the business cycle during the past seven recessions. As summarized in Table 2, we document an average threshold (which marks a turning point for that indicator) and an average lead time between when the threshold is reached and when a recession ensues. We then compare current data to these thresholds and show the evolution of the recession risks over the past six months.

TABLE 2
Recession Watch: Main Leading Indicators

	TIME TO RECESSION	THRESHOLD	MAR-19	APR-19	MAY-19	JUN-19	JUL-19	AUG-19
Yield Curve (10Y-3M)	12 months	<0	High	Moderate	High	High	High	High
Yield Curve (10Y-3M)	12 months	<0	Moderate	Moderate	Moderate	Moderate	High	High
S&P 500	8 months	Drop of 20% from peak	Low	Low	Low	Low	Low	Low
Banks Tightening Standards	3 months	>20%	Low	Low	Low	Low	Low	Low
Consumer Confidence	5 months	Drop of 25 points from peak	Low	Low	Low	Low	Low	Low
Temporary Help	5 months	Year-over-year decline > -2%	Low	Low	Low	Low	Low	Moderate
Hours Worked	6 months	Year-over-year decline > -1.5%	Low	Low	Low	Low	Low	Low
Unemployment Claims	5 months	>250K	Low	Low	Low	Low	Moderate	Low
Housing Permits	10 months	Year-over-year decline > -10%	Low	Low	Low	Low	Low	Low
Core CAPEX	2 months	Year-over-year decline	Low	Low	Low	Low	Moderate	Low
ISM Manufacturing	4 months	<45	Low	Low	Low	Low	Low	Moderate

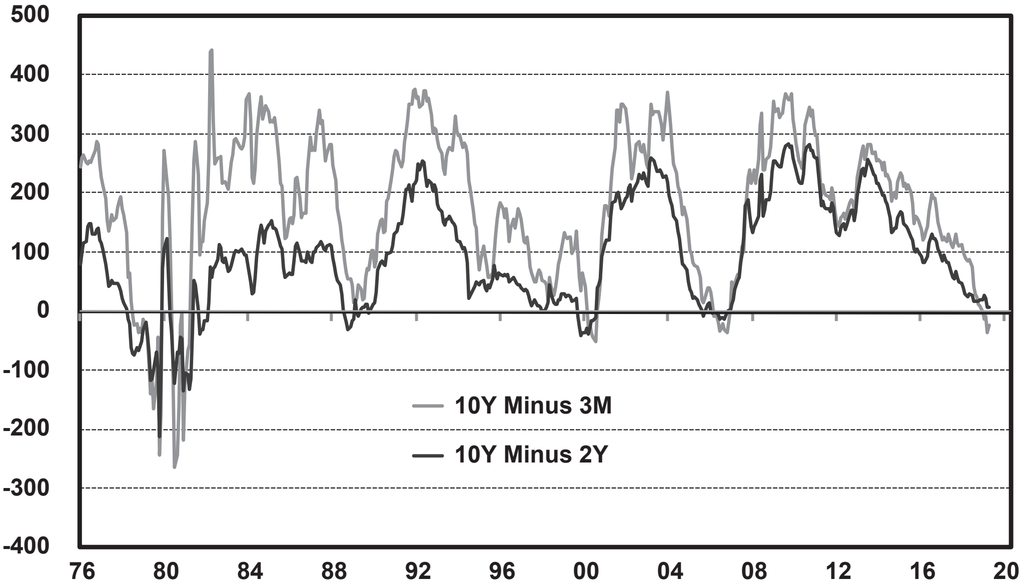
None of the indicators, other than the yield curve, is signaling a recession at the moment.

These indicators fall into four broad categories: financial (yield curve spread, S&P500 performance, tightening of bank standards); consumer sector (consumer sentiment, unemployment claims, temporary help and hours worked); housing (housing permits); and production sector (core CAPEX orders and ISM manufacturing). The yield curve has the longest lead time to a recession (roughly 12 months) while core capital goods orders has the shortest (around two months). As seen, none of the indicators, other than the yield curve, is signaling a recession at the moment. The momentum is a bit weaker in temporary help services (as growth has slowed in this sector), but the pace of growth continues to remain positive. Weakness can also be seen in the production side (ISM manufacturing and CAPEX orders) in line with the above discussion, but even here, both signals are above levels where manufacturing woes become systemic recession risks.

There are reasons to be a bit more skeptical of the signals from the yield curve this time around. The many rounds of quantitative easing by the Fed are estimated to have suppressed long-term yields by around 60 basis points; if these estimates are accurate, neither the 10-year/3month spread nor the 10year/2year spread would have been inverted during this cycle.

The signal from the yield curve is cause for concern but not outright panic, at least not yet (Figure 9) (as a point of reference, a yield curve inversion has preceded every post-war recession. As we have argued in the past, there are reasons to be a bit more skeptical of the signals from the yield curve this time around. First, the many rounds of quantitative easing by the Fed are estimated to have suppressed long-term yields by around 60 basis points. If these estimates are in the ballpark of the real compression, then neither the 10-year/3month spread nor the 10year/2year spread would have been inverted during this cycle. Second, the bond markets are vastly more interconnected internationally than national economies, which means that bond prices in the U.S. reflect global developments as well. It is no coincidence that the inversion of the 10year/2year spread occurred on the heels of the release of dismal data from China and Germany. Third, the yield curve has issued false signals in the past: In 1966, when a slowdown, but not a recession, followed an inversion, and also briefly in 1998 on the heels of the LTCM collapse. Fourth, the depth and the length of the inversion matter: In all three previous recessions, the inversion of the 10-year/2year spread lasted for months (not days, as has been the case in this cycle), and the incursion in negative territory was much deeper (from -20 basis points to -50) than the quick dip we saw at the end of August.

FIGURE 9
Danger Zone: The Yield Curve Is Flashing Warning Signs
(yield curve spread, basis points)



A case can be made then that "this time is different." However, we are not as ready as others to dismiss the signals coming from the yield curve. A higher perceived risk of recession, even if based on distorted signals, may be corrosive if it erodes business sentiment and eats away at consumer confidence. Beset by negative news, businesses may hold back on investment spending, stop hiring or even begin to cut back on employment rolls. This would certainly force consumers to hunker down, become more cautious and reign in spending in a vicious feedback loop that may well lead into "talking ourselves into a recession." Though this is not our baseline scenario, our no-recession outlook rests squarely (and, admittedly, uncomfortably) on the policy response: a truce in the trade war, an avoidance of a hard Brexit, and an accommodative monetary policy at home and abroad.

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Still Standing: Easing into Slower Growth

"Serenity Now"
– Frank Costanza, *Seinfeld*

While a deft resolution of policy (and political) uncertainty that clouds the outlook will be crucial in avoiding a headlong plunge into recession, odds are that growth will slow over the forecast horizon. To begin with, this expansion is long in the tooth – the longest in post-war era – and while, as we argued above, imbalances have not been built as rapidly as in the past, supply-side shocks emanating from trade wars, Brexit concerns and the lagged effect of the recent monetary tightening have delivered powerful body blows to the outlook.

The evidence of a slowdown is virtually everywhere. To take a measure of recent momentum, we compiled a Momentum Dashboard (Table 3), which shows a summary of trends in main indicators: If over the past three months the data have improved compared to the 12-month moving average, the cell is light gray; if the three-month trend is the same as in the past 12 months, the cell is white, and if momentum has weakened the cell is marked in dark gray. As seen in the table, with few exceptions, most indicators point to a steadily deteriorating outlook.

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TABLE 3
Momentum Dashboard

	Q1 2018	Q2 2018	Q3 2018	Q4 2018	Q1 2019	Q2 2019	Q3 2019
Consumer Sentiment	Better	Better	Better	Better	Worse	Worse	Same
Retail Sales	Better	Better	Better	Same	Worse	Worse	Worse
Payroll	Better	Better	Better	Worse	Better	Worse	Worse
Unemployment Rate	Better	Better	Better	Better	Same	Better	Better
Business Sentiment	Better	Better	Better	Same	Worse	Worse	Worse
Core CAPEX Orders	Better	Same	Better	Worse	Worse	Worse	Worse
Industrial Production	Better	Better	Better	Better	Worse	Worse	Worse
ISM Manufacturing	Better	Better	Same	Worse	Worse	Worse	Worse
ISM Nonmanufacturing	Better	Better	Better	Better	Worse	Worse	Worse
Housing Starts	Better	Better	Worse	Worse	Worse	Worse	Better
Existing Home Sales	Worse	Worse	Worse	Worse	Worse	Better	Better

Slower growth, however, does not mean a descent into the depths of a recession. A solid argument can be made that, despite the shocks and setbacks, the economy has, so far, held up reasonably (almost surprisingly) well. Growth slowed to 2.1% in the second quarter from a 3.1% pace in the first, but the details were more robust. Transitory factors, such as inventory changes and trade, made up more than one-third of growth in the first quarter while consumer spending grew by a tepid 1.1% (contributing just 0.8% to growth). In contrast, the second quarter, though more modest, was better balanced: Consumer spending grew by a blistering 4.6% while government spending contributed nearly 0.9% to growth. The third quarter GDP is also shaping up better than expected: The Atlanta Fed GDP Now model and the New York Fed high-frequency projections (both of which track GDP in real time), show a reading for Q3 of 1.8% and 2.1%, respectively. While not spectacular, these high-frequency models indicate that the economy is not skidding off the rails.

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The resiliency of this expansion has come to depend largely on the U.S. consumer, which means that the outlook for growth is also closely linked to the outlook for consumption spending. And here, signs so far continue to point to further growth: Retail sales came in higher than expected in August, rising by 0.8%, while core retail sales continue to see a healthy pace coming at an annualized rate of 4.2%. Though much of the strength in the August report came from motor vehicle sales (with this category registering the fastest growth since March), the “control group” of retail sales, which excludes a number of volatile categories and serves as a proxy for consumer spending in the GDP report, also registered positive growth (0.3%).

The fundamentals continue to remain supportive of spending with household balance sheets strong and borrowing costs manageable.

The fundamentals continue to remain supportive of spending with household balance sheets strong and borrowing costs manageable. Wages and salaries have grown steadily (though unspectacularly) at roughly 3.2%-3.3% pace. Real disposable income has grown at an average rate of 3.2% over the first eight months of the year – below the 3.9% pace set during the comparable period in 2018 but solid nonetheless. Household net worth continues to set record highs, rising from $54 trillion in Q1 2009 to a current $113 trillion (more than five time the GDP). More encouragingly, housing wealth has significantly surpassed its pre-crisis peak (at $14.5 trillion in 2006) to a current $18.7 trillion.

The labor market – the main propeller of a strong consumer – continues to remain solid. The pace of job formation has stepped down a notch: from 223,000 per month in 2018 to 179,000 jobs per month this year (and down to 157,000 over the last three months). And though we expect this data to be revised lower in the BLS’s next annual benchmark (in February 2020), the trend is still impressive, especially when taking into account the longevity of this expansion. In fact, the revision of roughly half a million jobs during the period from March 2018 to March 2019 (which will likely show up in next year’s benchmark revision), is closer to where we expect the job market to be at this stage of the business cycle.

Of course, with anxiety levels high and sentiment on edge, labor market statistics take on an added importance. The September market report seems to have hit the right tone: With 136,000 jobs added, it was neither too cold (to spike up fears of an impending recession) nor too hot (to put the brakes on another Fed rate cut). There was some more encouraging news beneath the headline numbers: The unemployment rate fell to a brag-worthy 3.5% (from 3.7%), the lowest since 1969; August payrolls were revised modestly upwards, and temporary help workers rose for a second straight month – which would be unusual if the economy was barreling towards a recession.

Recession fears will spike up if the unemployment rate begins to nudge up. But as long as payroll employment rises by roughly 100,000 jobs per month (consistent with labor force expansion), the unemployment rate will continue to remain at rock-bottom levels.

Recession fears will spike up if the unemployment rate begins to nudge up (roughly around 0.3-0.4 percentage points over a three-month period). But as long as payroll employment rises by roughly 100,000 jobs per month (the pace consistent with labor force expansion), the unemployment rate will continue to remain at rock-bottom levels. So far, employment rolls have grown at a pace above the 100,000 break-even level. Other labor market leading indicators are equally upbeat: Unemployment claims continue to remain at exceptionally low levels and the job opening rate is at all-time highs. More encouragingly, the quits rate is also at the top of its historical range, indicating that workers are confident in switching jobs when they wish to.

The housing market also seems to have caught a second wind as of late. There is no doubt that housing has had a tough couple of years, but this trend appears to have reversed in recent months as lower mortgage rates breathe new life into this sector. Evidence of a housing revival is everywhere: Total housing starts jumped 12.3% to a 1.36-million-unit pace in August (the highest since 2007); builder sentiment is much improved, and existing home sales posted back-to-back monthly increases, a first since 2017. New homes sales jumped 7.1% in August and are running around 6.4% above year-ago values, the highest since 2007 (albeit still much lower than in 2006). And even though the jump in housing starts was largely due to a spike in multi-family units (which are notoriously volatile on a month-to-month basis), single family starts posted a solid 4.4%, coming at 919,000 units. This is the third highest pace since the start of the expansion. Though housing is unlikely to be the main propeller of growth going forward, it won't be a drag either, and it is expected to contribute positively to GDP over the next few quarters.

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The weakest spot in the outlook (outside manufacturing and exports) is business investments, which have shown a sharp slowdown during this year. Second quarter real nonresidential investments grew by a feeble 2.6% compared to year-ago values, less than half the 6.4% torrid rate recorded in 2018. Survey data point to further deceleration: According to the Duke University CFO Survey for large corporations, the growth in planned capital expenditures over the next 12 months is projected to be 0.6%, the slowest pace since 2016, when corporate profits and earnings fell due to the collapse of the energy sector and a softening of manufacturing output.

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This should not come as a surprise amidst a flare-up in trade tensions, the fading effect of the Tax Cuts and Jobs Act, and a synchronized global slowdown. Policy uncertainty and trade tensions are likely to continue to cast a pall in the outlook, at least for the remainder of this year, which means that we expect investments to continue to struggle, eking out modest gains in the second half of 2019.

Dark Clouds: Outlook Hinges Largely on Policy (and Political) Whims

> "I'm on First and First. How can the same street intersect with itself?
> I must be at the nexus of the universe."
> – Kramer, *Seinfeld*

Much like Kramer's nexus of the universe (which, coincidentally, is located in the Village in New York City), the nexus of this expansion resides squarely on policy and (more worryingly) on political whims, which more than at any point during this cycle, can sway the outlook one way or another. Indeed, as this report has argued, the main threats to the outlook (and subsequently, the solutions) are supply-driven concerns with deep political/policy roots: trade wars, monetary policy, Brexit, and ongoing geopolitical and domestic political tensions (such as Iran and impeachment proceedings).

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Of these, the ongoing trade war between the U.S. and China is perhaps the most consequential (and a bigger headline-grabber). Though its direct impact on the economy is minimal (the goods trade with China account for a mere 3.2% of the GDP), it packs a hefty blow in other intangible ways: a sagging of sentiment, a rise in policy uncertainty, and a more hesitant (and anxious) business and consumer landscape. Tariffs were mentioned in more than one-quarter of all earning calls among companies in the S&P 500 index during the second quarter; while according to the National Federation of Independent Businesses report, 30% of small firms reported a negative impact from tariffs in September. Tariffs and trade wars have impacted consumer sentiment as well: The Michigan Consumer survey indicated that more consumers reported unfavorable news about the economy than at any point in the past eight years with nearly a third of consumers citing worries about tariffs as the main cause for concern.

As the trade war drags on, it's becoming clearer that its impact on soft data (such as sentiment) has begun to seep into real outcomes with potential negative impact on growth. Though we are more sanguine than the consensus on the actual real impact of trade war in the economy (at least thus far), there is no doubt that, at a minimum, it has crimped investment spending as firms rewire their supply chains and rework their long-term capital investments.

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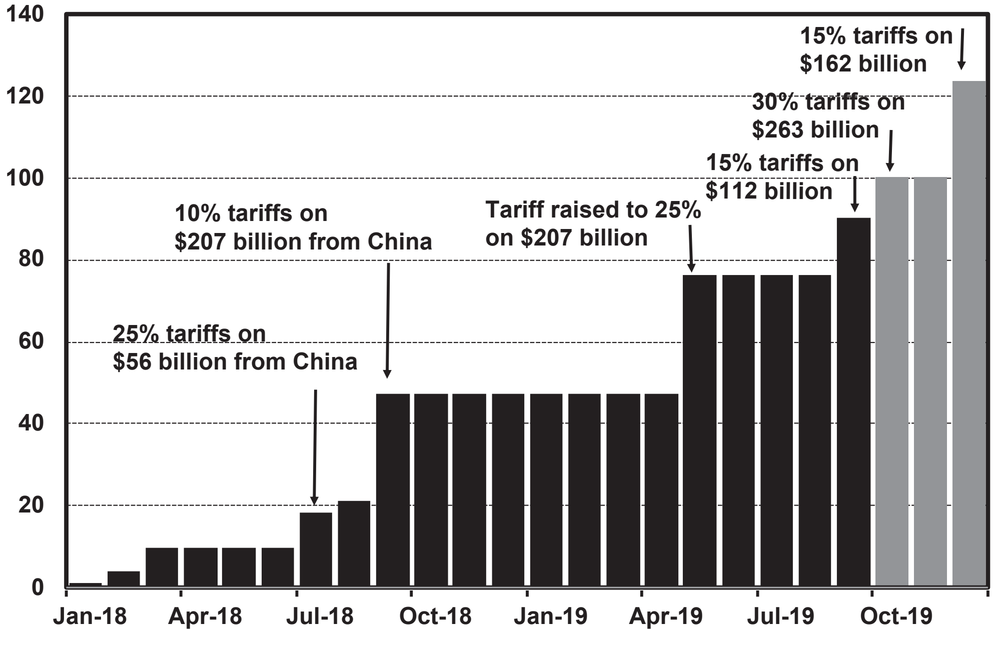
The trade war has escalated, further going from bad to worse in a span of a few months (Figure 10). In May, the U.S. announced a tariff rate hike from 10% to 25% on $200 billion worth of Chinese goods (first tariffed last September). China retaliated in kind, raising tariff rates on $60 billion of U.S. exports previously tariffed. Talks resumed at the end of July, but on Aug. 1, the U.S. announced that all remaining Chinese goods ($300 billion) would face a 10% tariff starting in September. Faced with a spate of negative data and a weakening of sentiment, the administration announced a few weeks later that the latest tariffs would be applied in two waves: in September ($112 billion) and the rest in December (after the shopping season). China responded by weakening its currency to below ¥7 per dollar – a highly symbolic but deeply psychological level – and by slapping tariffs on the remaining $75 billion worth of U.S. exports.

FIGURE 10
The Escalating Cost of Trade War
(annualized costs based on value of goods and tariff rate)



Given all this, it is hard to see how the two sides can come up with an all-encompassing agreement that would reshape global trade, level the playing field and remake the rules of the game. The trade war is about a lot more than just trade: Part of it resembles a cold war over market shares, national security and global dominance for the technologies of the future (such as artificial intelligence and 5G).

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These issues are much thornier to deal with than agreeing to ramp up purchases of pork or soybeans. Our baseline assumption is that both sides would call a cease-fire this year and agree on a truce (a limited trade deal) in 2020, given the political calendar (U.S. elections and the centennial anniversary of the founding of the Chinese Communist Party). Indeed, as this report was going to print, it appeared that the two sides have made progress in their talks, with “phase one” (a more limited agreement addressing intellectual property, financial services and agricultural products) almost complete.

Our baseline assumption is that both sides would call a cease-fire this year and agree on a truce (a limited trade deal) in 2020, given the political calendar.

If political wrangling on trade is hard to follow and even harder to predict, the fate of Brexit is virtually impossible to ascertain. As of this writing, there are only 13 days left until the “do or die” deadline (as characterized by Boris Johnson, the current prime minister) of Oct. 31. It appears that a last-minute deal is being cobbled together between the U.K. and the EU. The two sides appeared to have reached some type of compromise on the now infamous, “Irish backstop,” an arrangement to avert a hard border in the island of Ireland that would have kept the U.K. in a customs union with the EU. The new deal appears to keep Northern Ireland under the EU’s regulatory regime but requires regulatory and customs check between Northern Ireland and Great Britain (which means that goods would be checked between Northern Ireland and the mainland somewhere in the Irish Sea). Effectively, what was a backstop for the entire country, has turned into a form of backstop for Northern Ireland alone. The U.K. (including Northern Ireland) will be able to negotiate freely new bilateral/multilateral trade deals.

It’s unclear whether the deal will be approved by the U.K. parliament. Already the Northern Ireland’s Democratic Unionist Party (Johnson’s ally) has said they wouldn’t support the deal because the agreement would weaken the bonds between Northern Ireland and the rest of the U.K. A no-deal Brexit has supposedly been ruled out by the Benn Act, restricting the prime minister’s ability to leave the EU with no deal. However, there have been rumors that the administration was exploring ways around it which involve either invoking arcane laws (Civil Contingencies Act, to suspend the law) or political maneuvering (such as formally asking an extension but in private telling Brussels it does not want one). This will be a nail-biter until the end.

With political risks high, central banks have to do even more heavy-lifting than usual. They have already started to do so, though more is needed. The Fed spent a good deal of the year (and especially this past month) convincing the market that the economy is “in good shape.” While that assessment is not necessarily incorrect, our view is that they are underestimating risks and overestimating the strength of the economy. This is not a first: As we cautioned back then (and has become more apparent over time), the December rate hike was overly restrictive and inconsistent with the underlying strength of the economy.

With political risks high, central banks have to do even more heavy-lifting than usual. They have already started to do so, though more is needed.

The good news is that the Fed seems to have learned from its recent past and has dramatically shifted its policy stance. It paused rate hikes in the first half of the year and pivoted to rate cutting in July and September. Though the early move was considered “an insurance against low inflation” and a “mid-cycle correction” and not a commencement of a trend, the September rate cut paints a different picture. It acknowledges that the economy is in a vulnerable place and that the Fed will “act as appropriate” to sustain the economic expansion.

This is certainly the right tone and the right approach. Though monetary policy is a poor tool to address supply-side shocks like trade wars and Brexit, it can certainly cushion the blows. Soft landings have been rare historically, but whenever they occurred, they coincided with an easing of interest rates, which lengthened the expansion and contributed to a subsequent pick-up in economic activity. The Fed has lowered interest rates three times during an expansion (in 1967, 1985 and 1995-1996). All three cycles ended up being the three longest expansions (outside the current one) in the post-war era. Our view is that the Fed will deliver one more rate cut this year and two more by mid-2020.

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ORANGE COUNTY AND SOUTHERN CALIFORNIA

The state Employment Development Department (EDD), the official source of payroll and employment data, appears to be grossly underestimating, for a third year in a row, employment trends in Orange County as well as those of other counties in the region.

While the outlook is clouded by considerable noise at the national level, we are still able to discuss with some level of confidence, as above, trends in the national economy. This is because of availability of frequent, regular and dependable data. Unfortunately, that has not been the case when it comes to Orange County and Southern California economies. The state Employment Development Department (EDD), the official source of payroll and employment data, appears to be grossly underestimating, for a third year in a row, employment trends in Orange County as well as those of other counties in the region. Though employment growth in the county and surrounding area has indeed slowed down, it is not as much as the EDD numbers would indicate. Similar to national trends, we expect job growth in Orange County to continue at a moderate pace this year and the next, but at a substantially better clip than, for example, the paltry 0.6% growth the EDD estimates as of September 2019. This does not square well also with other data we monitor: For example, the Woods Center quarterly business expectations surveys, indicates that local business leaders continue to be upbeat about conditions at the local level, certainly more so than what the EDD numbers seem to imply.

The Labor Market: Overview

Orange County's unemployment rate has recently been at historic lows. It dropped to 2.4% in May 2019, a level not seen since May 1999. Similarly, the May 2019 unemployment rate in the Inland Empire dropped to 3.5%, while the Los Angeles County rate dropped to 4%, both historic lows. The state as a whole registered a rate of 3.5% in May 2019, also a historic low. While these numbers are subject to seasonal and other adjustments, there is little doubt that household employment is keeping close pace with increases in labor force. The strong economy is certainly one of the reasons for this phenomenon. Another possible explanation may lie in the fact that a number of people who stepped out of the labor force during the Great Recession are coming back but slowly, keeping the labor market tight. The unemployment rate has risen somewhat over the past few months for all counties, though it continues to remain at historically low levels.

There is, however, another anomaly of the data that we should point out: Over the past five years, growth in labor force and the household employment in Orange County has been significantly different from growth in payroll employment.

There is, however, another anomaly of the data that we should point out: Over the past five years, growth in labor force and the household employment in Orange County has been significantly different from growth in payroll employment. This is a change from the long-term trend. The two employment statistics, household employment and payroll employment, come from different surveys, but as Figure 11 shows, until 2014, the trends in the two indicators were generally similar. However, since then payroll employment growth has far exceeded household employment and labor force growth. This is not the case for the U.S. economy where the trends through the last 20 years have been similar (Figure 12).

Until further data refinements are available from the U.S. and state sources, we have to assume that since 2014 there has been an upward bias in the statistics for Orange County payroll employment. So while the payroll employment growth has consistently underestimated "real" job growth (as witnessed by the many rounds of annual revisions), the payroll employment level may have been overestimated, starting back in 2014.

FIGURE 11
Orange County Labor Force, Household Employment and Payroll Employment (level, millions of employees)

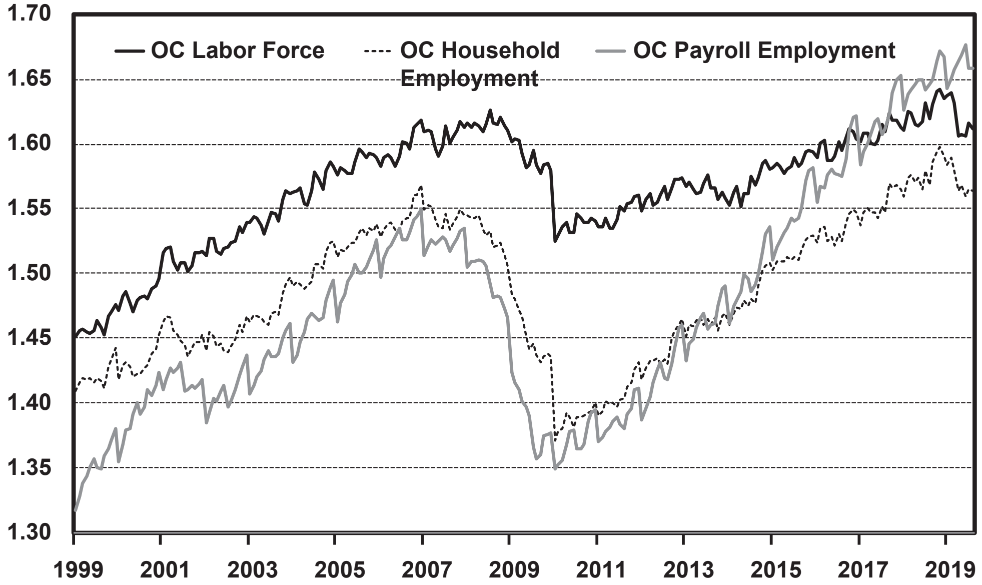
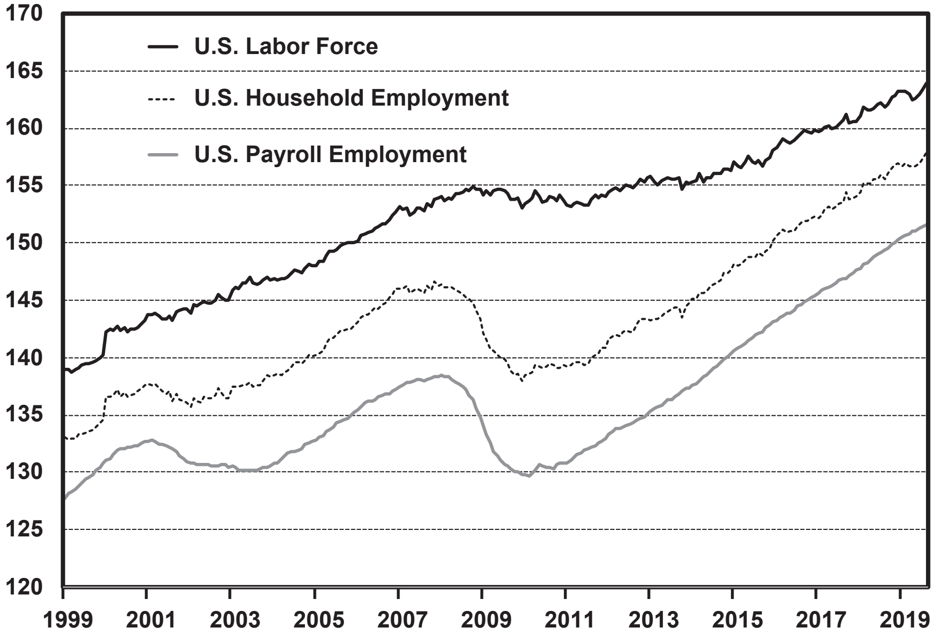


FIGURE 12
U.S. Labor Force, Household Employment and Payroll Employment (level, millions of employees)



Indeed, we argued in the previous two reports that consistently lower monthly employment figures for Orange County for 2017 and 2018 were suspect. As it turned out, during the benchmark revisions of the data, both years were revised substantially upward. Table 1 summarizes our analysis of this phenomenon for Orange, Los Angeles and Riverside-San Bernardino counties.

We argued in the previous two reports that consistently lower monthly employment figures for Orange County for 2017 and 2018 were suspect. As it turned out, during the benchmark revisions of the data, both years were revised substantially upward.

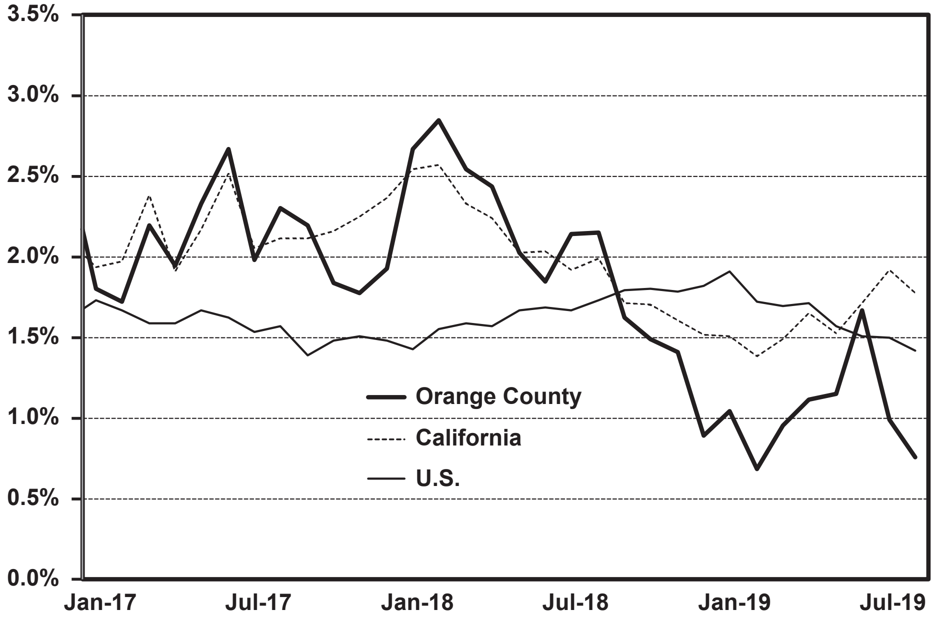
TABLE 4
Employment Development Department Benchmark Revisions Over- and Under-estimates of Monthly Total Non-farm Employment

	AS OF AUGUST RELEASE	AFTER BENCHMARK REVISION	DIFFERENCE	% DIFFERENCE
ORANGE COUNTY				
2015	1,533,825	1,530,140	(3,685)	-0.24%
2016	1,574,175	1,571,560	(2,615)	-0.17%
2017	1,582,638	1,605,563	22,925	1.45%
2018	1,627,054	1,659,525	32,471	2.00%
LOS ANGELES COUNTY				
2015	4,295,288	4,243,025	(52,263)	-1.22%
2016	4,341,038	4,363,338	22,300	0.51%
2017	4,244,663	4,408,363	163,700	3.86%
2018	4,471,238	4,536,325	65,087	1.46%
RIVERSIDE-SAN BERNARDINO COUNTIES				
2015	1,323,425	1,334,263	10,838	0.82%
2016	1,375,450	1,387,263	11,813	0.86%
2017	1,431,138	1,436,925	5,787	0.40%
2018	1,487,713	1,521,163	33,450	2.25%

When looking at the data in September/October 2018 (before the large benchmark revisions for 2018 for Orange (32,471 or 2%), Los Angeles (65,087 or 1.5%), and Inland Empire (33,450 or 2.3%), one would conclude that the three counties' economies were doing a lot worse than they actually were. This also leads astray forecasts for these counties since most forecasts rely heavily on the most recent data.

It appears that the EDD data may be giving similar false signals again for Orange County for this year. As seen in the Figure 13, based on the monthly data releases by EDD, the county payroll employment is showing a significant downshift compared to the previous year. This is a marked

FIGURE 13
EDD Payroll Employment Data: Orange County vs. California and the U.S. (y-o-y percent change)



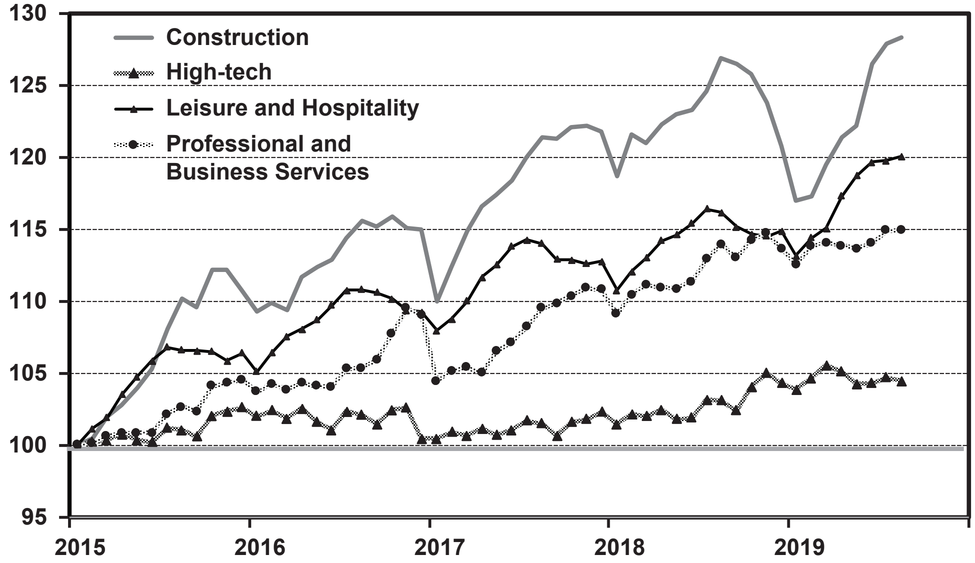
difference from the trends for California and the U.S. We have, therefore, made appropriate adjustments to the Orange County data for possible major revisions to its 2019 data that will be undertaken in February and March 2020.

Combined with the results on labor force/household employment versus the growth in payroll employment, the picture for predicting employment movements becomes very complicated indeed.

Combined with the results on labor force/household employment versus the growth in payroll employment, the picture for predicting employment movements becomes very complicated indeed.

Taking the latest benchmarked data as the base for 2018, Orange County added 32,300 payroll jobs for a 2% increase in 2018, while Los Angeles added 61,800 for a 1.4% increase and the Inland Empire 49,500 for a 3.4% increase. For Orange County, the major contributors were Professional and Business services (12,400), Education and Health (9,100), Leisure and Hospitality (4,500), and Construction (4,300) (Figure 14). For Los Angeles County, Education and Health was again the outlier, as in 2018, with a gain of 23,000 jobs, two-thirds of which were in the health area, followed by Professional and Business Services (11,200) and Leisure and Hospitality (9,700). The Inland Empire saw an increase of 13,400 jobs in Education and Health Services followed by 10,500 jobs in Transportation and Warehousing and 7,400 in construction. Detailed tables for each county and the Southern California region are provided at the end of the report.

FIGURE 14
Orange County Major Sector Employment Trends
(Index level, Jan. 2015=100)



Business Expectations

The Orange County Business Expectations survey (OCBX), conducted by Cal State Fullerton's Woods Center for Economic Analysis and Forecasting, produces an index of local business sentiment. The index value for Q4 2019 (90.9) is significantly lower compared to the fourth quarter of 2018 (96.2) but higher than the third quarter of 2019 (87.1). The overall value of the OCBX index is a weighted average of several survey questions and provides a measure of overall business expectations for Orange County. Unlike the national trend, where a generally dourer mood seems to have set in, business leaders in Orange County are more upbeat and see little to worry about in the near term.

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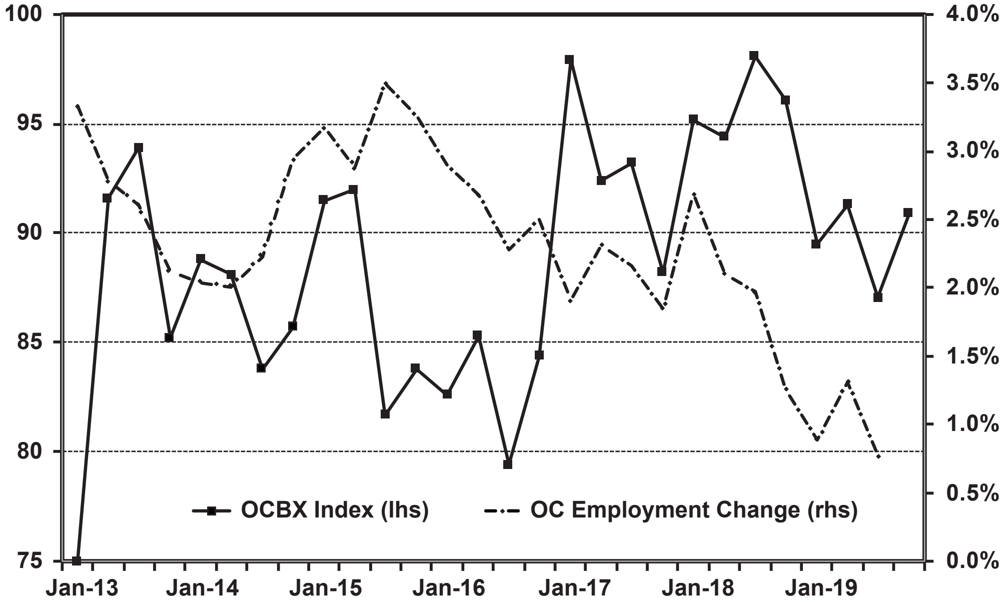
FIGURE 15
Orange County OCBX Index and Employment Change (index level and employment change (y-o-y))

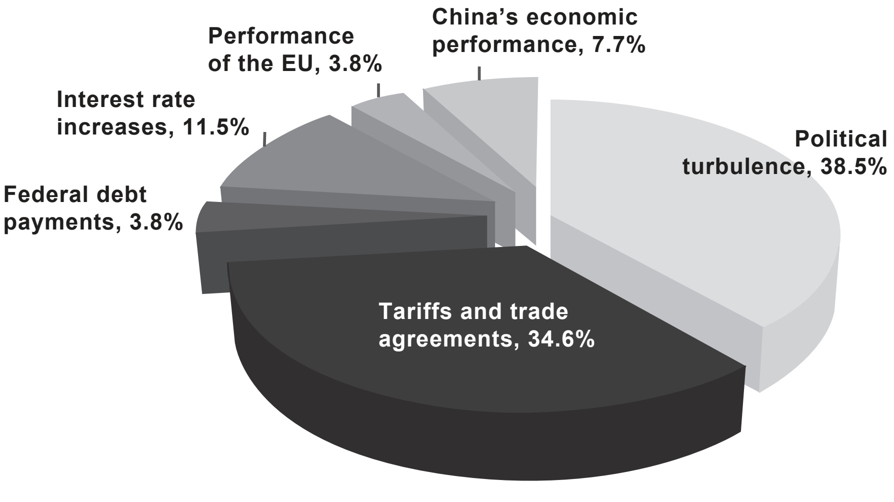


The index has proven accurate in the past in predicting future job changes in Orange County. A reading above 50 indicates expected continued growth in the economy. If it continues that trend, it is predicting improvement in the county's employment picture. As discussed above, the EDD payroll employment data appear to underestimate the current strength of the Orange County economy. As a result, the OCBX index and the lagged employment series are diverging more than usual (see the full report on the Woods Center website).

In a special question we asked the business leaders to point out major threats to the economy. Political turbulence and trade wars/tariffs are stated as the leading causes, followed by the Fed's policy on interest rates and the state of the Chinese economy.

In a special question for this quarter's survey, we asked the business leaders to point out major threats to the economy. As Figure 16 shows, political turbulence and trade wars/tariffs are stated as the leading causes, followed by the Fed's policy on interest rates and the state of the Chinese economy. When asked about the probability of recession by 2020, more than 60% stated that it was 20% or less.

FIGURE 16
OCBX Survey of Orange County Business Executives Biggest Threats to Orange County Economy



Housing and Construction

Home price appreciation throughout the region slowed down appreciably during 2018 and 2019. For 2018 the median price of a single-family home increased by 4.3%, 6.4%, 6.9% and 6.5% for Orange, Los Angeles, Riverside and San Bernardino counties, respectively. But through August 2019, growth had reduced to 0.7%, 2.2%, 2.3% and 4.4% respectively (Figure 17). In Orange County, for three of the first eight months of the year, prices actually fell slightly on a year-over-year basis. The current median price in the county is $800,000, the highest it has ever been, and it has held pretty steady at that level during the year. Similar changes are observed in other counties of the region. In Los Angeles, the current median price is $665,000, also at its highest level. But in Riverside where the current median price is $420,000 and San Bernardino with $370,000, prices are still below those reached before the Great Recession.

Home price appreciation throughout the region slowed down appreciably during 2018 and 2019.

In Orange County, for three of the first eight months of the year, prices actually fell slightly on a year-over-year basis.

FIGURE 17
Home Prices: A Cross-County Perspective
(year-over-year, percent change; annualized growth ytd in 2019)

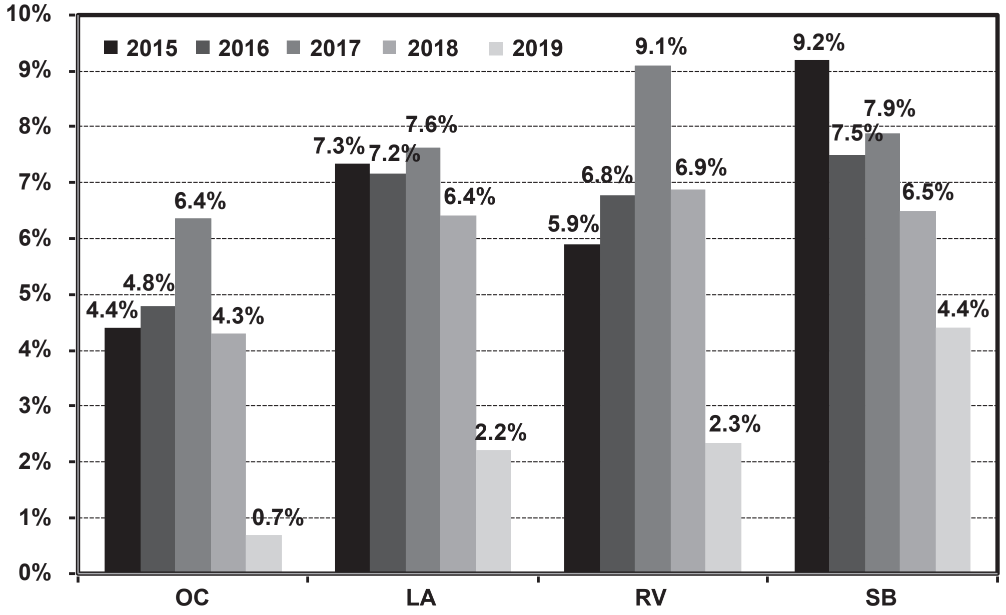
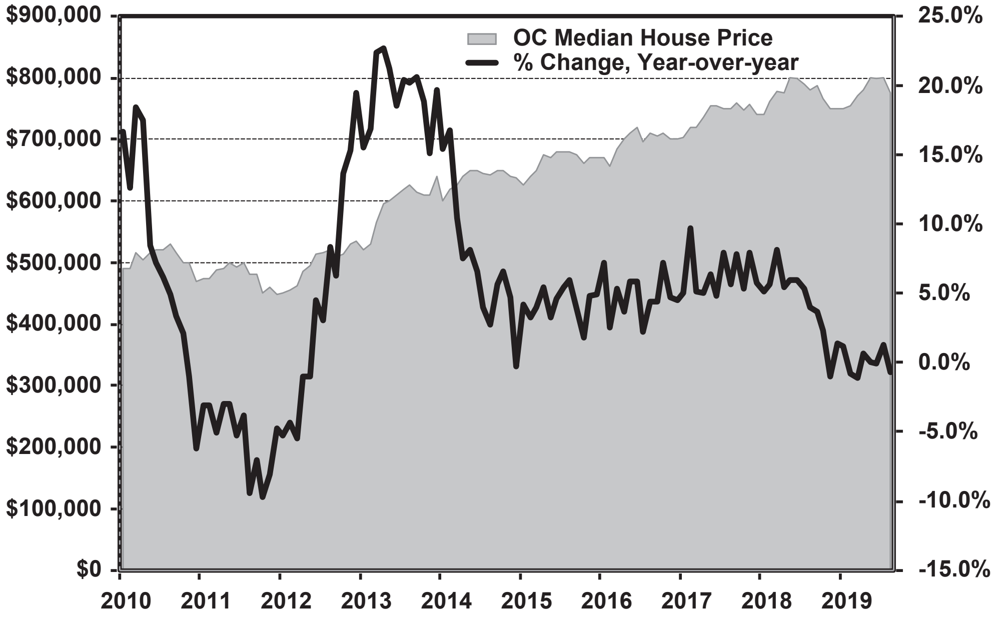


FIGURE 18
Orange County Median Home Prices (level and percent change)



The 30-year fixed-term mortgage rate as of September was 3.6%, a more than 1% reduction from a rate of 4.7% at the end of September 2018 and a high of 5% in November 2018. This has led to increased refinance activity and may lead to improved housing construction in the region.

Future construction will be conditioned by the general state of the economy and household confidence. Home price appreciation will be restrained at best.

This is not a novel phenomenon nor is it unique to Southern California. Home price appreciation has taken a step back nationally. Urban centers such as Manhattan in New York City and San Francisco are experiencing moderations as well. After the Great Recession, there was a rapid recovery during 2012-14 period. But other factors are contributing to the slowdown as well. Land and construction materials prices have jumped significantly and local land use regulations usually don't allow higher density developments thus making single family homes unaffordable. Construction as a result has slowed down. Given the homeless crisis in California there are efforts underway to reduce the complexity of housing construction regulations but it will be a while before their effects can be measured.

The 30-year fixed-term mortgage rate as of September was 3.6%, a more than 1% reduction from a rate of 4.7% at the end of September 2018 and a high of 5% in November 2018. This has led to increased refinance activity and may lead to improved housing construction in the region. As we discussed in the national scenario, we expect further rate cuts over the next few quarters as the Fed seems committed to extend the life-span of this expansion in the face of slowing global growth, trade wars and a series of other shocks. But future construction will be conditioned by the general state of the economy and household confidence. Home price appreciation will be restrained at best, 2% or less for Orange County and the Southern California region.

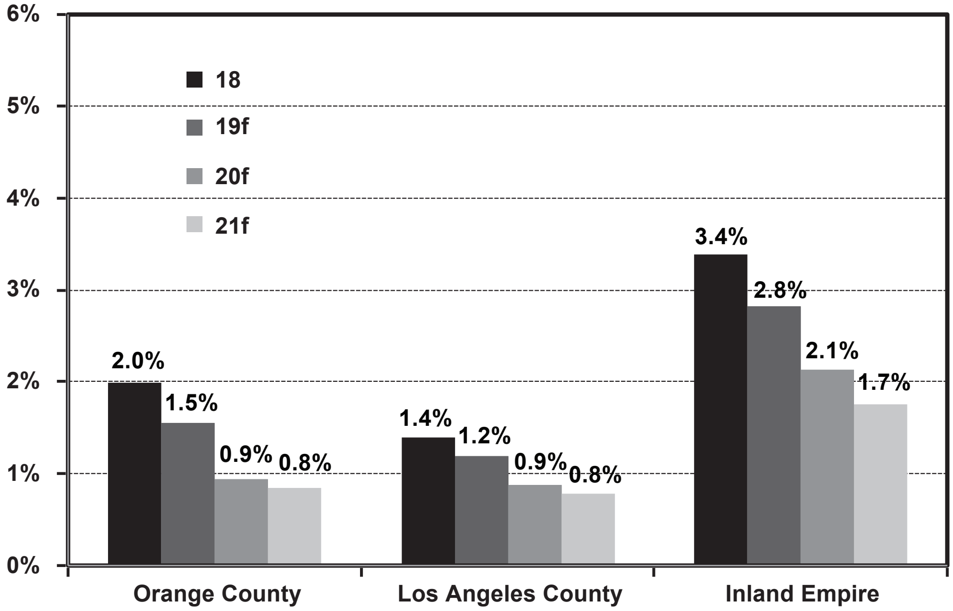
Construction activity in 2019 has continued at a pace similar to that of 2018. Approximately 45,000 construction permits are expected to be issued in 2019 for Southern California but then decline at somewhat lower levels for the next two years. Most of the growth will be coming from the Inland Empire and Los Angeles County. Lower interest rates are beginning to provide a small cushion for construction for an industry faced with high labor costs and costly building processes. Given current trends, construction permits for Orange County are expected to decrease to 8,300 (see the tables at the end of this report).

Forecasts

Despite the monthly EDD data showing weak year-over-year improvement, 0.6% through September, we believe that Orange County's employment growth will actually continue at a moderate pace. We are projecting job growth of 25,500 (or 1.6% increase) in 2019 and 16,000 jobs gain (a 0.9% increase) in 2020 and 14,300 (0.8% increase) in 2021 (Figure 19). We expect unemployment in Orange County to reach 3-3.5% for the next two years.

We believe that Orange County's employment growth will actually continue at a moderate pace.

FIGURE 19
Payroll Employment Forecasts
(annual percent rates)



The unemployment rate in Los Angeles County is expected to reach 4.3-4.8% for the next two years, while the Inland Empire is expected be in the range 3.8-4.8%. Expected payroll gains for the Los Angeles County will be 53,400 for a 1.2% increase in 2019, 39,700 for a 0.9% increase in 2020 and 36,000 for a 0.8% gain in 2021. For the Inland Empire region, payroll employment gains of 42,500 for a 2.8% increase in 2019, 33,000 for a 2.1% increase in 2020 and 27,600 for a 1.8% increase in 2021 are expected.

Detailed economic data for all of the counties are given in the following tables.

Thanks are due to Bob Giuliano and Aaron Popp for assistance with this report. Any errors remain the authors' responsibility.

TABLE 1 - NATIONAL

	2014	2015	2016	2017	2018	2019f	2020f	2021f	3 year average 2019-2021
GDP									
Real GDP (Bil. $)	16,912	17,404	17,689	18,108	18,638	19,067	19,410	19,798	19,425.1
% change RGDP	2.5	2.9	1.6	2.4	2.9	2.3	1.8	2.0	2.0
Nominal GDP (Bil. $)	17,527	18,225	18,715	19,519	20,580	21,445	22,324	23,306	22,358.1
% change Nominal GDP	4.4	4.0	2.7	4.3	5.4	4.2	4.1	4.4	4.2
RGDP Components									
Personal Consumption (% change)	3.0	3.7	2.7	2.6	3.0	2.6	2.2	2.0	2.3
Nonresidential Fixed Investments (% change)	7.2	1.8	0.7	4.4	6.4	2.7	2.9	4.2	3.3
Residential Investments (% change)	3.8	10.2	6.5	3.5	-1.5	-1.2	2.2	4.5	1.8
Exports (% change)	4.2	0.5	0.0	3.5	3.0	0.3	3.5	4.4	2.7
Imports (% change)	5.0	5.3	2.0	4.7	4.4	2.1	4.0	4.4	3.5
Net Exports (Bil. $)	-577	-722	-784	-850	-920	-985	-1037	-1083	-1,035
Federal Deficit (Bil. $)	-485	-442	-585	-665	-779	-960	-1,008	-1,100	-1,023
Labor Sector									
Unemployment Rate (%)	6.2	5.3	4.9	4.4	3.9	3.7	3.6	3.8	3.7
Payroll Employment (% change)	1.9	2.1	1.8	1.6	1.7	1.3	0.9	0.7	1.0
Average Weekly Hours (saar)	34.5	34.5	34.4	34.4	34.5	34.4	34.2	34.1	34.2
Labor Productivity (%, saar)	0.8	1.3	0.1	1.1	1.3	1.8	2.0	1.9	1.9
Prices and Wages									
CPI (% change)	1.6	0.1	1.3	2.1	2.4	1.9	2.1	2.2	2.1
Core CPI (% change)	1.8	1.8	2.2	1.8	2.1	2.1	2.0	2.1	2.1
PCE Deflator (% change)	1.5	0.2	1.0	1.8	2.1	1.6	1.9	2.0	1.8
GDP Deflator (% change)	1.8	1.0	1.0	1.9	2.4	2.0	2.3	2.3	2.2
Employment Cost Index (% change)	2.1	2.1	2.2	2.5	2.8	2.9	3.1	3.2	3.1
Income/Profits									
Personal Income (% change)	5.7	4.8	2.6	4.7	5.6	4.6	4.0	3.4	4.0
Real Disposable Income (% change)	4.1	4.1	1.8	2.9	4.0	3.1	2,7	2.5	2.8
Savings Rate (% of disp. income)	7.4	7.6	6.8	7.0	7.7	8.0	7.6	7.3	7.6
After-Tax Profits (% change)	3.9	-2.8	-1.9	3.2	10.0	1.8	3.2	4.4	3.1
Financial Markets (year-end)									
Federal Funds Rate (Upper range) (%)	0.25	0.50	0.75	1.50	2.50	1.75	1.25	1.00	1.33
3-Month T-bill rate (%)	0.03	0.23	0.51	1.32	2.37	1.68	1.22	1.15	1.35
10-Year Treasury Note (%)	2.21	2.24	2.49	2.40	2.83	1.70	1.92	2.26	1.96
30-Year Fixed Mortgage Rate (%)	3.87	4.01	4.32	3.99	4.55	3.35	3.55	3.87	3.59
Exchange Rate, Major Trading Partners (% change)	6.5	11.8	3.9	-4.1	6.5	2.3	1.8	-1.5	0.87
Other Key Measures									
Crude Oil - Brent ($ per Barrel)	99.0	52.3	43.6	54.1	71.3	65	58	72	65.0
Industrial Production (% change)	3.1	-1.0	-2.0	2.3	3.9	0.5	1.2	2.4	1.4
Housing Starts (Mill. Units, saar)	1.00	1.11	1.18	1.21	1.25	1.26	1.28	1.29	1.3
Existing Home Sales (Mill. Units, saar)	4.92	5.23	5.44	5.53	5.34	5.37	5.62	5.47	5.5
Light Vehicle Sales (Mill. Units, saar)	16.5	17.4	17.5	17.1	17.2	16.9	16.7	16.5	16.7

TABLE 2 - ORANGE COUNTY

	2017	2018	2019f	2020f	2021f
Levels in Thousands					
Population					
Total population	3209.5	3237.1	3264.8	3292.5	3311.5
Annual percentage change	0.8%	0.9%	0.9%	0.8%	0.6%
Household Employment					
Labor Force	1609.8	1625.4	1639.3	1653.2	1662.8
Total Employment	1553.4	1577.9	1592.5	1602.0	1608.2
Total Unemployment	56.4	47.6	46.8	51.2	54.6
Unemployment Rate	3.5%	2.9%	2.9%	3.1%	3.3%
Wage and Salary Employment					
Total Nonfarm	1,617.0	1,649.3	1,674.9	1,690.6	1,704.9
Goods Producing	262.7	266.4	268.5	270.4	272.5
Mining and Logging	0.5	0.5	0.5	0.5	0.5
Construction	101.8	106.1	108.0	110.1	112.0
Manufacturing	160.5	159.8	160.0	159.8	160.0
Durable Goods	117.3	117.6	118.1	118.3	118.8
Nondurable Goods	43.2	42.2	41.9	41.5	41.2
Service Providing	1,354.3	1,383.0	1,406.3	1,420.1	1,432.4
Trade, Transportation and Utilities	260.5	262.2	262.9	263.3	263.5
Wholesale Trade	79.0	80.1	81.9	82.8	83.8
Retail Trade	153.5	152.9	151.5	151.1	150.5
Transportation, Warehousing and Utilities	28.0	29.3	29.5	29.3	29.2
Information	26.8	26.7	26.5	26.2	25.9
Financial Activities	119.6	119.1	117.8	118.0	118.1
Professional and Business Services	303.0	315.4	323.1	330.5	335.8
Educational and Health Services	215.9	225.0	229.7	232.0	234.2
Leisure and Hospitality	218.1	222.6	231.2	233.7	236.5
Other Services	50.3	51.1	51.0	51.6	52.0
Government	160.2	160.8	164.2	164.9	166.3
Percentage change					
Total Nonfarm	2.1%	2.0%	1.5%	0.9%	0.8%
Goods Producing	2.7%	1.4%	0.8%	0.7%	0.8%
Mining and Logging	41.5%	3.4%	-0.1%	0.3%	0.2%
Construction	4.5%	4.2%	1.8%	1.9%	1.8%
Manufacturing	1.4%	-0.4%	0.1%	-0.1%	0.1%
Durable Goods	0.9%	0.3%	0.5%	0.2%	0.4%
Nondurable Goods	2.8%	-2.3%	-0.7%	-0.9%	-0.7%
Service Providing	1.9%	2.1%	1.7%	1.0%	0.9%
Trade, Transportation and Utilities	0.8%	0.6%	0.2%	0.1%	0.1%
Wholesale Trade	0.5%	1.3%	2.2%	1.2%	1.2%
Retail Trade	0.6%	-0.4%	-0.9%	-0.3%	-0.5%
Transportation, Warehousing and Utilities	2.8%	4.6%	0.6%	-0.5%	-0.3%
Information	3.1%	-0.2%	-0.8%	-1.2%	-1.0%
Financial Activities	1.3%	-0.4%	-1.1%	0.2%	0.1%
Professional and Business Services	1.7%	4.1%	2.4%	2.3%	1.6%
Educational and Health Services	4.7%	4.2%	2.1%	1.0%	0.9%
Leisure and Hospitality	2.9%	2.1%	3.9%	1.1%	1.2%
Other Services	-0.3%	1.6%	-0.2%	1.0%	0.9%
Government	0.4%	0.4%	2.1%	0.5%	0.8%
Levels in millions					
Personal Income					
Personal Income	208.7	220.2	230.8	241.6	253.1
Annual percentage change	4.6%	5.5%	4.8%	4.7%	4.8%
Per capita income ($)	$65,011	$68,014	$70,688	$73,392	$76,440
Levels in billions					
Taxable Sales					
Total taxable sales	64.6	66.8	69.3	71.9	74.5
Year to year percentage change	3.3%	3.5%	3.8%	3.7%	3.7%

TABLE 3 - SOUTHERN CALIFORNIA

	2017	2018	2019f	2020f	2021f
Levels in Thousands					
Population					
Total population	19113.9	19324.7	19536.6	19748.6	19943.3
Annual percentage change	0.7%	1.1%	1.1%	1.1%	1.0%
Household Employment					
Labor Force	9220.8	9312.0	9272.3	9312.9	9382.5
Total Employment	8785.6	8909.0	8913.3	8914.3	8957.9
Total Unemployment	435.1	402.9	392.5	401.9	430.3
Unemployment Rate	4.7%	4.3%	4.2%	4.3%	4.6%
Wage and Salary Employment					
Total Nonfarm	7,877.2	8,024.6	8,149.3	8,240.0	8,320.7
Goods Producing	995.7	1,012.0	1,025.0	1,027.5	1,029.5
Mining and Logging	6.2	6.2	6.5	6.5	6.6
Construction	353.3	373.7	388.5	399.2	408.5
Manufacturing	636.3	632.1	630.0	621.8	614.5
Durable Goods	402.6	405.6	407.4	404.6	401.6
Nondurable Goods	233.7	226.5	222.6	217.2	212.8
Service Providing	6,881.5	7,012.5	7,124.3	7,212.5	7,291.2
Trade, Transportation and Utilities	1,543.8	1,563.2	1,569.6	1,587.6	1,601.7
Wholesale Trade	378.3	383.0	386.3	389.6	392.5
Retail Trade	808.6	806.7	801.8	808.3	813.3
Transportation, Warehousing and Utilities	357.0	373.5	381.5	389.7	395.9
Information	258.3	260.5	253.2	253.2	252.8
Financial Activities	403.6	403.6	397.7	400.0	401.3
Professional and Business Services	1,103.5	1,131.5	1,149.9	1,157.1	1,163.8
Educational and Health Services	1,297.1	1,344.6	1,392.2	1,424.5	1,454.3
Leisure and Hospitality	950.6	968.8	999.8	1,018.9	1,035.9
Other Services	261.9	266.7	268.9	272.1	274.1
Government	1,062.7	1,073.6	1,093.1	1,099.1	1,107.3
Percentage change					
Total Nonfarm	1.9%	1.9%	1.6%	1.1%	1.0%
Goods Producing	0.7%	1.6%	1.3%	0.2%	0.2%
Mining and Logging	-4.0%	0.9%	4.2%	0.9%	1.2%
Construction	4.6%	5.8%	4.0%	2.7%	2.3%
Manufacturing	-1.3%	-0.7%	-0.3%	-1.3%	-1.2%
Durable Goods	-0.1%	0.8%	0.4%	-0.7%	-0.7%
Nondurable Goods	-3.1%	-3.1%	-1.7%	-2.4%	-2.0%
Service Providing	2.0%	1.9%	1.6%	1.2%	1.1%
Trade, Transportation and Utilities	2.0%	1.3%	0.4%	1.2%	0.9%
Wholesale Trade	0.3%	1.2%	0.9%	0.9%	0.7%
Retail Trade	0.6%	-0.2%	-0.6%	0.8%	0.6%
Transportation, Warehousing and Utilities	7.3%	4.6%	2.1%	2.2%	1.6%
Information	-5.1%	0.9%	-2.8%	0.0%	-0.2%
Financial Activities	0.6%	0.0%	-1.5%	0.6%	0.3%
Professional and Business Services	1.6%	2.5%	1.6%	0.6%	0.6%
Educational and Health Services	4.0%	3.7%	3.5%	2.3%	2.1%
Leisure and Hospitality	3.0%	1.9%	3.2%	1.9%	1.7%
Other Services	1.2%	1.8%	0.8%	1.2%	0.7%
Government	1.8%	1.0%	1.8%	0.6%	0.7%
Levels in millions					
Personal Income					
Personal Income	1038.4	1097.0	1150.9	1206.1	1264.3
Annual percentage change	3.7%	5.6%	4.9%	4.8%	4.8%
Per capita income ($)	$54,329	$56,765	$58,911	$61,071	$63,397
Levels in billions					
Taxable Sales					
Total taxable sales	314.3	320.5	327.5	336.6	345.9
Year to year percentage change	3.3%	2.0%	2.2%	2.8%	2.8%

TABLE 4 - LOS ANGELES COUNTY

	2017	2018	2019f	2020f	2021f
Levels in Thousands					
Population					
Total population	10163.5	10233.2	10303.6	10374.3	10446.6
Annual percentage change	0.1%	0.7%	0.7%	0.7%	0.7%
Household Employment					
Labor Force	5096.5	5136.4	5080.8	5072.2	5087.7
Total Employment	4853.8	4896.5	4852.1	4838.9	4838.4
Total Unemployment	242.7	239.8	228.6	233.3	249.3
Unemployment Rate	4.8%	4.7%	4.5%	4.6%	4.9%
Wage and Salary Employment					
Total Nonfarm	4,448.3	4,510.1	4,563.5	4,603.2	4,639.1
Goods Producing	490.3	491.6	497.7	493.0	489.5
Mining and Logging	2.0	1.9	2.0	2.1	2.2
Construction	138.4	146.0	154.8	157.3	159.9
Manufacturing	349.9	343.7	340.9	333.6	327.4
Durable Goods	202.1	202.9	204.9	202.2	200.1
Nondurable Goods	147.7	140.8	136.0	131.4	127.3
Service Providing	3,958.0	4,018.5	4,065.8	4,110.1	4,149.6
Trade, Transportation and Utilities	845.7	850.9	853.2	859.2	864.1
Wholesale Trade	221.5	222.8	225.1	226.2	227.2
Retail Trade	426.1	425.3	420.5	424.8	427.9
Transportation, Warehousing and Utilities	198.2	202.8	207.6	208.3	209.1
Information	214.9	217.4	210.5	211.0	210.9
Financial Activities	221.6	223.0	219.2	221.3	222.7
Professional and Business Services	608.8	620.0	626.9	626.0	626.4
Educational and Health Services	800.6	823.6	847.1	866.1	883.3
Leisure and Hospitality	524.6	534.3	549.8	560.8	570.8
Other Services	155.7	159.7	163.9	164.9	166.0
Government	586.1	589.6	595.1	600.8	605.4
Percentage change					
Total Nonfarm	1.2%	1.4%	1.2%	0.9%	0.8%
Goods Producing	-1.4%	0.3%	1.2%	-0.9%	-0.7%
Mining and Logging	-16.8%	-4.5%	3.6%	4.5%	3.7%
Construction	3.3%	5.5%	6.1%	1.6%	1.6%
Manufacturing	-3.0%	-1.8%	-0.8%	-2.1%	-1.9%
Durable Goods	-0.6%	0.4%	1.0%	-1.3%	-1.1%
Nondurable Goods	-6.1%	-4.7%	-3.4%	-3.4%	-3.1%
Service Providing	1.6%	1.5%	1.2%	1.1%	1.0%
Trade, Transportation and Utilities	1.2%	0.6%	0.3%	0.7%	0.6%
Wholesale Trade	-0.3%	0.6%	1.0%	0.5%	0.4%
Retail Trade	0.3%	-0.2%	-1.1%	1.0%	0.7%
Transportation, Warehousing and Utilities	4.9%	2.4%	2.3%	0.3%	0.4%
Information	-6.3%	1.1%	-3.1%	0.2%	0.0%
Financial Activities	0.8%	0.7%	-1.7%	1.0%	0.6%
Professional and Business Services	1.5%	1.8%	1.1%	-0.1%	0.1%
Educational and Health Services	3.6%	2.9%	2.9%	2.2%	2.0%
Leisure and Hospitality	2.9%	1.8%	2.9%	2.0%	1.8%
Other Services	1.5%	2.6%	2.6%	0.6%	0.7%
Government	1.6%	0.6%	0.9%	1.0%	0.8%
Levels in millions					
Personal Income					
Personal Income	593.7	628.4	660.3	692.9	727.5
Annual percentage change	2.9%	5.8%	5.1%	4.9%	5.0%
Per capita income ($)	$58,419	$61,407	$64,081	$66,786	$69,638
Levels in billions					
Taxable Sales					
Total taxable sales	159.3	161.7	165.2	168.7	172.1
Year to year percentage change	3.3%	1.6%	2.1%	2.1%	2.1%

TABLE 5 - RIVERSIDE /SAN BERNARDINO COUNTIES

	2017	2018	2019f	2020f	2021f
Levels in Thousands					
Population					
Total population	4722.9	4823.1	4923.5	5024.0	5114.7
Annual percentage change	2.2%	2.1%	2.1%	2.0%	1.8%
Household Employment					
Labor Force	2017.7	2053.4	2057.5	2092.2	2133.6
Total Employment	1914.9	1966.8	2004.3	2004.3	2037.6
Total Unemployment	102.8	86.6	87.9	87.9	96.0
Unemployment Rate	5.1%	4.2%	4.1%	4.2%	4.5%
Wage and Salary Employment					
Total Nonfarm	1,454.9	1,504.2	1,546.7	1,579.7	1,607.3
Goods Producing	197.6	207.3	210.4	215.3	218.6
Mining and Logging	1.0	1.2	1.2	1.2	1.2
Construction	97.4	104.8	107.9	112.8	116.6
Manufacturing	99.2	101.3	101.3	101.3	100.8
Durable Goods	64.1	65.1	63.9	64.1	63.5
Nondurable Goods	35.2	36.2	37.4	37.2	37.3
Service Providing	1,257.3	1,296.9	1,336.3	1,364.4	1,388.7
Trade, Transportation and Utilities	365.5	378.3	382.9	393.4	401.1
Wholesale Trade	62.6	64.9	63.9	64.9	65.4
Retail Trade	180.9	180.8	183.3	185.0	186.6
Transportation, Warehousing and Utilities	122.1	132.6	135.7	143.6	149.1
Information	11.3	11.2	11.1	11.0	11.0
Financial Activities	44.2	43.7	43.1	43.9	44.5
Professional and Business Services	146.9	150.6	154.9	155.4	156.2
Educational and Health Services	226.7	240.0	257.8	267.2	276.7
Leisure and Hospitality	166.3	170.0	175.7	180.2	183.2
Other Services	45.4	45.6	43.7	45.3	45.6
Government	251.0	257.5	267.2	268.0	270.4
Percentage change					
Total Nonfarm	3.7%	3.4%	2.8%	2.1%	1.7%
Goods Producing	3.1%	4.9%	1.5%	2.3%	1.5%
Mining and Logging	4.5%	20.7%	1.4%	4.2%	0.1%
Construction	5.9%	7.6%	2.9%	4.6%	3.3%
Manufacturing	0.5%	2.1%	0.0%	0.0%	-0.4%
Durable Goods	-0.6%	1.5%	-1.7%	0.3%	-0.9%
Nondurable Goods	2.7%	3.0%	3.2%	-0.6%	0.3%
Service Providing	3.8%	3.1%	3.0%	2.1%	1.8%
Trade, Transportation and Utilities	5.1%	3.5%	1.2%	2.8%	2.0%
Wholesale Trade	1.5%	3.7%	-1.6%	1.6%	0.9%
Retail Trade	1.5%	0.0%	1.4%	0.9%	0.9%
Transportation, Warehousing and Utilities	13.0%	8.6%	2.4%	5.8%	3.9%
Information	-1.6%	-1.0%	-0.7%	-0.5%	-0.4%
Financial Activities	-0.8%	-1.3%	-1.3%	1.8%	1.4%
Professional and Business Services	1.4%	2.6%	2.8%	0.3%	0.5%
Educational and Health Services	5.1%	5.9%	7.4%	3.7%	3.6%
Leisure and Hospitality	3.9%	2.2%	3.4%	2.5%	1.7%
Other Services	1.8%	0.3%	-4.2%	3.7%	0.8%
Government	3.6%	2.6%	3.7%	0.3%	0.9%
Levels in millions					
Personal Income					
Personal Income	178.9	188.2	196.9	205.7	214.8
Annual percentage change	4.9%	5.2%	4.6%	4.5%	4.4%
Per capita income ($)	$37,875	$39,019	$39,984	$40,941	$41,999
Levels in billions					
Taxable Sales					
Total taxable sales	74.3	75.5	75.9	78.5	81.2
Year to year percentage change	4.3%	1.7%	0.5%	3.4%	3.4%

TABLE 6 - VENTURA COUNTY

	2017	2018	2019f	2020f	2021f
Levels in Thousands					
Population					
Total population	854.2	863.7	873.2	882.6	891.6
Annual percentage change	0.4%	1.1%	1.1%	1.1%	1.0%
Household Employment					
Labor Force	424.7	425.7	424.7	425.9	428.9
Total Employment	405.6	409.7	407.1	409.3	411.3
Total Unemployment	19.1	16.1	16.0	16.6	17.6
Unemployment Rate	4.5%	3.8%	3.8%	3.9%	4.1%
Wage and Salary Employment					
Total Nonfarm	305.4	308.9	311.9	314.0	316.4
Goods Producing	42.2	43.9	45.4	45.9	46.2
Mining and Logging	0.9	0.9	0.9	0.9	0.9
Construction	15.7	16.8	17.8	19.0	20.0
Manufacturing	25.6	26.2	26.7	26.1	25.2
Durable Goods	18.6	19.5	19.9	19.5	18.7
Nondurable Goods	7.0	6.7	6.8	6.6	6.5
Service Providing	263.2	265.0	266.6	268.1	270.2
Trade, Transportation and Utilities	59.5	59.1	58.7	59.4	60.7
Wholesale Trade	13.2	13.2	13.3	13.7	14.0
Retail Trade	40.1	39.6	38.9	39.6	40.6
Transportation, Warehousing and Utilities	6.1	6.4	6.5	6.1	6.0
Information	5.0	5.0	4.8	4.7	4.6
Financial Activities	16.9	16.5	16.4	15.5	14.6
Professional and Business Services	42.2	42.9	42.7	42.7	42.9
Educational and Health Services	45.9	47.6	48.7	50.5	51.3
Leisure and Hospitality	37.2	37.7	38.7	39.9	41.0
Other Services	9.6	9.4	9.4	9.4	9.5
Government	46.9	46.9	47.2	46.0	45.6
Percentage change					
Total Nonfarm	1.7%	1.2%	1.0%	0.7%	0.8%
Goods Producing	2.4%	4.0%	3.3%	1.2%	0.5%
Mining and Logging	0.0%	-2.8%	3.0%	2.0%	1.3%
Construction	7.4%	7.1%	5.9%	6.4%	5.4%
Manufacturing	-0.3%	2.4%	1.7%	-2.3%	-3.2%
Durable Goods	0.0%	5.0%	1.7%	-2.0%	-3.8%
Nondurable Goods	-1.1%	-4.4%	1.7%	-3.1%	-1.3%
Service Providing	1.5%	0.7%	0.6%	0.6%	0.8%
Trade, Transportation and Utilities	0.7%	-0.6%	-0.7%	1.2%	2.1%
Wholesale Trade	1.8%	-0.4%	0.7%	3.2%	2.5%
Retail Trade	0.3%	-1.3%	-1.6%	1.7%	2.5%
Transportation, Warehousing and Utilities	1.7%	3.4%	2.4%	-6.0%	-1.3%
Information	0.8%	-0.7%	-4.1%	-1.9%	-0.9%
Financial Activities	-2.8%	-2.3%	-0.9%	-5.3%	-5.6%
Professional and Business Services	3.2%	1.7%	-0.3%	-0.1%	0.6%
Educational and Health Services	3.3%	3.7%	2.5%	3.6%	1.6%
Leisure and Hospitality	2.4%	1.3%	2.5%	3.2%	2.7%
Other Services	0.3%	-2.2%	-0.2%	0.5%	0.2%
Government	0.7%	-0.1%	0.7%	-2.6%	-0.8%
Levels in millions					
Personal Income					
Personal Income	50.6	53.3	55.8	58.3	61.0
Annual percentage change	4.5%	5.4%	4.7%	4.6%	4.6%
Per capita income ($)	$59,178	$61,670	$63,875	$66,096	$68,460
Levels in billions					
Taxable Sales					
Total taxable sales	13.9	14.2	14.9	15.5	16.1
Year to year percentage change	1.1%	2.4%	4.7%	4.2%	3.5%

TABLE 7 - IMPERIAL COUNTY

	2017	2018	2019f	2020f	2021f
Levels in Thousands					
Population					
Total population	182.8	186.9	190.9	194.9	198.6
Annual percentage change	1.0%	2.2%	2.2%	2.1%	1.9%
Household Employment					
Labor Force	72.1	71.1	70.0	69.4	69.5
Total Employment	58.0	58.2	57.1	59.8	62.3
Total Unemployment	14.1	12.9	13.2	12.8	12.8
Unemployment Rate	19.5%	18.1%	18.8%	18.5%	18.5%
Wage and Salary Employment					
Total Nonfarm	51.6	52.0	52.4	52.6	53.0
Goods Producing	2.9	2.8	3.0	2.8	2.8
Mining, Logging and Construction	1.8	1.7	1.9	1.8	1.8
Construction	NA	NA	NA	NA	NA
Manufacturing	1.1	1.1	1.1	1.0	1.0
Durable Goods	0.5	0.5	0.6	0.5	0.5
Nondurable Goods	0.6	0.6	0.5	0.5	0.5
Service Providing	48.7	49.2	49.4	49.8	50.3
Trade, Transportation and Utilities	12.6	12.6	11.9	12.3	12.3
Wholesale Trade	2.0	2.1	2.2	2.1	2.1
Retail Trade	8.0	8.1	7.5	7.8	7.8
Transportation, Warehousing and Utilities	2.6	2.5	2.2	2.4	2.5
Information	0.3	0.3	0.3	0.3	0.3
Financial Activities	1.3	1.3	1.2	1.3	1.3
Professional and Business Services	2.6	2.6	2.3	2.5	2.5
Educational and Health Services	8.1	8.4	8.8	8.7	8.8
Leisure and Hospitality	4.4	4.2	4.4	4.3	4.4
Other Services	0.9	0.9	0.9	0.9	0.9
Government	18.5	18.8	19.5	19.4	19.6
Percentage change					
Total Nonfarm	2.4%	0.8%	0.6%	0.4%	0.8%
Goods Producing	1.2%	-1.7%	4.7%	-5.1%	-2.5%
Mining, Logging and Construction	-1.8%	-2.3%	8.4%	-5.2%	-0.6%
Construction	NA	NA	NA	NA	NA
Manufacturing	6.4%	-0.8%	-1.1%	-4.9%	-5.8%
Durable Goods	5.0%	-4.8%	14.0%	-8.9%	-1.7%
Nondurable Goods	7.7%	2.9%	-13.7%	-0.5%	-10.1%
Service Providing	2.5%	1.0%	0.4%	0.8%	1.0%
Trade, Transportation and Utilities	2.6%	0.1%	-5.5%	3.4%	-0.1%
Wholesale Trade	6.8%	4.6%	8.8%	-5.6%	-0.8%
Retail Trade	-0.1%	1.0%	-7.8%	4.5%	-0.5%
Transportation, Warehousing and Utilities	8.2%	-6.3%	-10.1%	8.9%	2.0%
Information	0.0%	0.0%	7.1%	1.0%	4.9%
Financial Activities	-3.7%	0.0%	-5.8%	5.9%	2.1%
Professional and Business Services	10.5%	-1.0%	-11.1%	7.9%	0.4%
Educational and Health Services	4.5%	3.9%	5.1%	-1.5%	1.4%
Leisure and Hospitality	0.4%	-3.4%	3.6%	-1.2%	0.9%
Other Services	6.9%	-0.9%	0.1%	0.5%	0.5%
Government	1.3%	1.8%	3.5%	-0.5%	1.5%
Levels in millions					
Personal Income					
Personal Income	6.6	6.9	7.2	7.6	7.9
Annual percentage change	4.1%	4.9%	4.4%	4.3%	4.3%
Per capita income ($)	$36,206	$37,147	$37,946	$38,755	$39,655
Levels in billions					
Taxable Sales					
Total taxable sales	2.3	2.2	2.1	2.0	1.9
Year to year percentage change	-6.2%	-5.3%	-4.5%	-3.8%	-3.2%

TABLE 8 - CONSTRUCTION AND REAL ESTATE ('000)

	2017	2018	2019f	2020f	2021f
Orange County					
Permits	9.5	8.2	8.0	7.7	7.8
Residential Valuation()	3,218.3	2,646.9	2,147.7	1,885.8	1,898.3
Non-residential Valuation()	2,017.8	3,689.5	3,001.5	2,853.2	2,827.0
Percentage Change					
Permits	-21.4%	-13.7%	-2.5%	-3.6%	1.0%
Residential Valuatiton	4.4%	-17.8%	-18.9%	-12.2%	0.7%
Non-residential Valuation	-17.7%	82.8%	-18.6%	-4.9%	-0.9%
Los Angeles County					
Permits	22.0	22.4	21.3	20.0	20.6
Residential Valuation()	7,240.7	6,896.9	6,362.9	6,834.9	7,359.4
Non-residential Valuation()	5,767.7	5,888.8	5,911.0	5,503.1	5,574.1
Percentage Change					
Permits	10.4%	1.6%	-4.7%	-6.3%	3.4%
Residential Valuatiton	12.9%	-4.7%	-7.7%	7.4%	7.7%
Non-residential Valuation	12.0%	2.1%	0.4%	-6.9%	1.3%
Riverside-San Bernardino Counties					
Permits	13.6	13.6	13.9	13.7	14.3
Residential Valuation()	3,127.5	3,839.3	3,352.1	3,439.4	3,486.1
Non-residential Valuation()	2,605.5	2,775.9	3,103.4	2,711.3	2,518.4
Percentage Change					
Permits	36.7%	-0.2%	2.4%	-1.4%	4.4%
Residential Valuatiton	24.6%	22.8%	-12.7%	2.6%	1.4%
Non-residential Valuation	29.5%	6.5%	11.8%	-12.6%	-7.1%
Ventura County					
Permits	2.3	1.2	1.3	0.9	0.9
Residential Valuation()	694.5	523.9	346.7	324.3	342.7
Non-residential Valuation()	230.8	346.2	220.3	178.8	172.2
Percentage Change					
Permits	53.8%	-46.7%	5.2%	-27.4%	0.4%
Residential Valuatiton	67.2%	-24.6%	-33.8%	-6.5%	5.7%
Non-residential Valuation	28.7%	50.0%	-36.4%	-18.9%	-3.7%
Imperial County					
Permits	0.2	0.4	0.5	0.3	0.2
Residential Valuation()	41.5	67.5	77.8	88.3	96.9
Non-residential Valuation()	171.8	151.3	85.4	97.6	101.3
Percentage Change					
Permits	-11.1%	107.3%	15.4%	-44.2%	-9.1%
Residential Valuatiton	-33.9%	62.8%	15.2%	13.5%	9.7%
Non-residential Valuation	108.3%	-12.0%	-43.6%	14.4%	3.8%
Southern California					
Permits	47.6	45.8	45.0	42.6	43.9
Residential Valuatiton	14,322.4	13,974.4	12,287.2	12,572.7	13,183.5
Non-residential Valuation	10,793.6	12,851.6	12,321.6	11,344.1	11,193.0
Percentage Change					
Permits	9.0%	-3.9%	-1.8%	-5.3%	3.1%
Residential Valuatiton	14.7%	-2.4%	-12.1%	2.3%	4.9%
Non-residential Valuation	9.3%	19.1%	-4.1%	-7.9%	-1.3%

Sources: Number of housing permits and valuation data, in thousands, are from CCR

TRADE WITH CHINA THROUGH SOUTHERN CALIFORNIA PORTS

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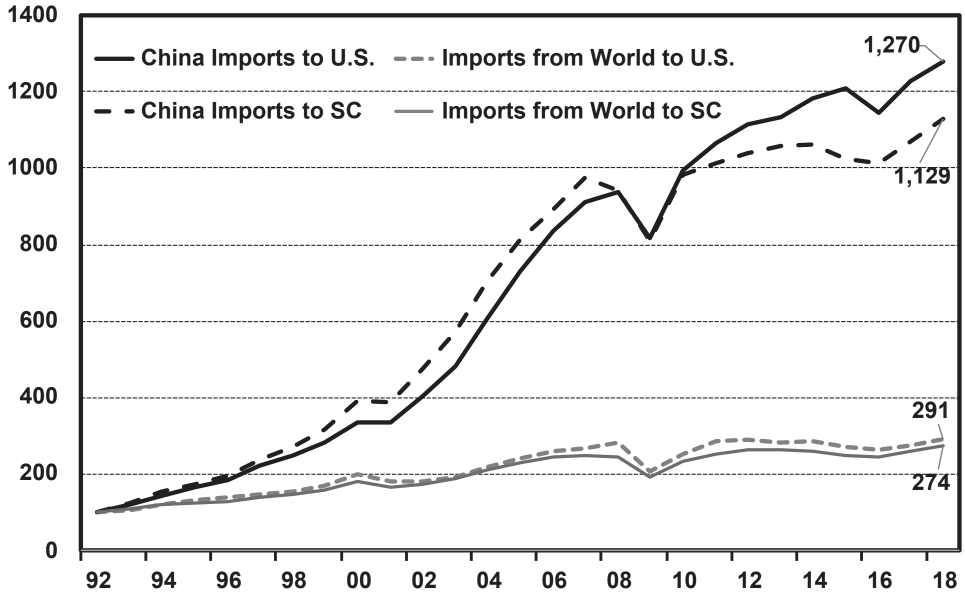
In "China Tariffs and Their Impact on Southern California," a study last year of the tariff war between the United States and China, we found that it would affect a smaller share of local products compared to the rest of the country. That finding suggests that local ports may handle substantially different imports from and exports to China compared to the rest of the U.S.

This article examines what imports from and exports to China local ports handle, as well as long-term trends in Southern California and overall U.S. trade with China. American trade with China has grown at more than double the rate of trade with the rest of the world since 1992. However, local trade with China and globally has grown roughly as fast as the rest of the country. The locational advantage of Southern California on the West Coast has not resulted in the region handling an increasing share of the nation's trade with China.

FIGURE 1
Chinese Imports to U.S. and Southern California (inflation-afjusted imports, index, 1992=100)



Location, however, does matter for what Southern California ports export. Local ports export relatively few agricultural products, raw resources and automobiles, but relatively more textiles and manufactured goods, likely reflecting trends in regional production. The distribution of local imports across sectors is comparable to the United States as a whole.

Imports

Figure 1 shows the rapid growth of Chinese imports into the United States and into Southern California (SC). The percentage change in the import indices over time computes the percentage change in inflation-adjusted[1] imports. The world import index of 291 indicates that imports into the United States grew by 191% by 2018 compared to 1992 (4.2% average annual rate to $2.54 trillion in 2018). Imports from China have grown much more substantially, by 1,179% compared to 1992 (10.3% average annual rate to $540 billion in 2018). Growth of imports through Southern California ports has been similar. Total imports into Southern California have grown by 174% (4% average annual rate to $326 billion in 2018), but imports from China have grown by 1,179% (9.8% average annual rate to $540 billion in 2018).

Between 1992 and the beginning of the Great Recession in 2007, growth of imports from China into Southern California ports slightly outpaced growth of imports from China for the country as a whole. However, since 2010, growth of imports from China into Southern California ports has been nearly half (15% total growth) compared to growth of imports from China in the country as a whole (28.7% total growth).

TABLE 1
Imports from China in 2018

SECTOR	IMPORTS INTO SC (BILLIONS OF U.S. DOLLARS)	SECTOR	IMPORTS INTO U.S. (BILLIONS OF U.S. DOLLARS)
Machinery / Electrical	$72.2	Machinery / Electrical	$268.4
Miscellaneous Manufactured Articles	$21.5	Miscellaneous Manufactured Articles	$64.9
Textiles	$18.4	Textiles	$40.5
Footwear / Headgear	$9.3	Base Metals	$28.1
Base Metals	$6.8	Plastics / Rubbers	$23.3
Plastics / Rubbers	$6.2	Transportation	$18.8
Transportation	$5.0	Chemicals & Allied Industries	$18.3
Chemicals & Allied Industries	$3.6	Footwear / Headgear	$18.1
Raw Hides, Skins, Leather, & Furs	$3.3	Precision Instruments	$13.9
Precision Instruments	$3.2	Stone / Glass	$8.2
All Other Sectors	$8.9	All Other Sectors	$37.3
Total	**$158.4**	**Total**	**$539.7**

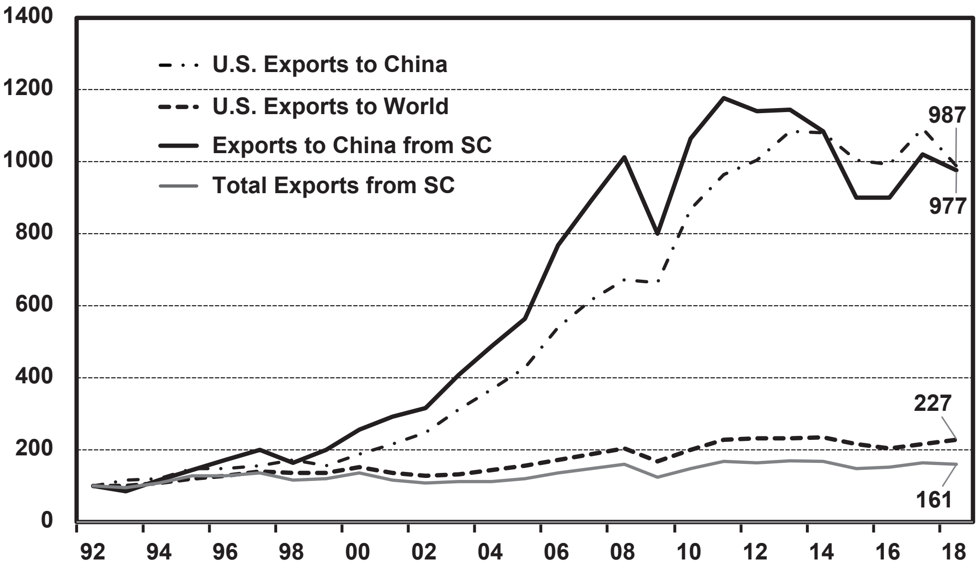
Table 1 shows the top 10 sectors that account for imports into Southern California and the U.S. as a whole. Southern California imports are largely representative of imports into the country as a whole. The largest two sectors[2] of imports for Southern California and the nation as a whole are mechanical products and miscellaneous manufactured goods. They accounted for similar shares of total imports for Southern California (57.2%) and for the U.S. (61.8%). Nine sectors appear in the top 10 imports for Southern California and the United States.

But Southern California handles a larger national share of textiles and footwear/headgear imports compared to the United States as a whole. A majority (51.2%) of footwear and headgear imported into the country comes through Southern California ports, which is larger than Southern California's share of total national imports (29.4%). In contrast, Southern California ports handle relatively few chemical imports: only 19.5% of total U.S. imports.

Exports

Figure 2 shows similar, but slightly slower, growth of U.S. exports to China as American imports. Growth of inflation-adjusted American exports overall since 1992 has been 127% (3.2% average annual growth to $1.67 trillion in 2018) while growth of American exports from Southern California ports has been lower at 61% (1.85% average annual growth to $130 billion in 2018). Growth in exports to China has been similar for local ports and American ports overall. Local ports have seen 877% growth in exports to China since 1992 (9.16% average annual growth to $26 billion), while the United States has seen 887% growth in exports to China over the same time period (9.21% average annual growth to $130 billion).

FIGURE 2
Exports from U.S. and Southern California to China (inflation-adjusted exports, index, 1992=100)



As was the case for imports, growth of exports to China from Southern California ports was faster prior to the Great Recession, but export growth from the rest of the United States to China has caught up since the downturn.

TABLE 2
Exports to China in 2018

SECTOR	EXPORTS FROM SC (BILLIONS OF U.S. DOLLARS)	SECTOR	IMPORTS INTO U.S. (BILLIONS OF U.S. DOLLARS)
Machinery / Electrical	$8.5	Transportation	$27.7
Chemicals & Allied Industries	$3.3	Machinery / Electrical	$27.1
Transportation	$2.6	Chemicals & Allied Industries	$12.3
Plastics / Rubbers	$2.2	Precision Instruments	$9.8
Precision Instruments	$2.1	Mineral Products	$9.5
Base Metals	$1.6	Plastics / Rubbers	$6.4
Pulp of Wood or of Other Fibrous Material	$1.0	Vegetable Products	$4.9
Textiles	$1.0	Base Metals	$4.8
Raw Hides, Skins, Leather, & Furs	$0.6	Pulp of Wood or of Other Fibrous Material	$4.0
Prepared Foodstuffs	$0.5	Wood & Wood Products	$2.9
All Other Sectors	$2.2	All Other Sectors	$10.8
Total	**$25.7**	**Total**	**$120.2**

Southern California ports export a large share of manufactured goods and textiles and relatively few agricultural products and natural resources. Table 2 shows that three of the top 10 exports to China from the United States are not among the top 10 exports. And there is significant variation in Southern California ports' share of exports. Ports in Southern California handle 21.3% of American exports to China but handle a majority of raw hides, skins, leather and fur exports (67.1%) as well as textile exports (58.2%). On the other hand, Southern California handles under 10% of the exports of vegetable products, natural or cultured pearls, mineral products, and wood and wood products. Also, likely because of the dearth of local automobile manufacturers, Southern California ports only handle 9.5% of transportation sector exports.

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[1] Using the GDP deflator

[2] The categories are determined by the "sections" of the trade data as classified by the first two digits of the trade code in the Census Bureau's data. These sections are: animal and animal products; vegetable products; animal or vegetable fats and oils; prepared foodstuffs; mineral products; chemicals and allied industries; plastics/rubbers; raw hides and leathers; wood and wood products; wood pulp or other fibrous material; textiles; footwear/headgear; stone/glass; natural or cultured pearls; base metals; machinery/electrical; transportation; precision instruments; arms and ammunition; miscellaneous manufactured articles; works of art; and miscellaneous.

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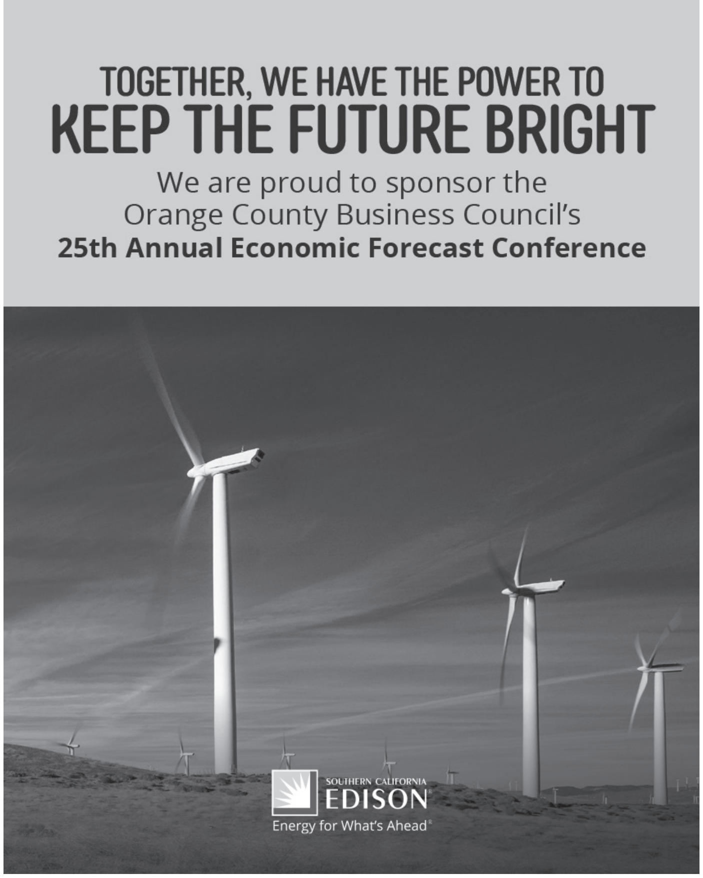

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